



SAN DIEGO COUNTY LABOR MARKET ANALYSIS

# CLEAN ENERGY

An Update on Labor Force and Training Needs

SAN DIEGO  
**WORKFORCE**  
**PARTNERSHIP**<sup>®</sup>

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Clean Energy involves research and application of environmentally friendly energy solutions. The majority of employers and jobs in San Diego County are in Energy Efficiency (e.g., efficient building) and Renewable Energy (e.g., solar power). A significant number of jobs in this sector involve the building trades, where new technologies are applied to construction jobs. This report is an update to the 2014 research that initially identified Clean Energy as a Priority Sector in San Diego County. The full report examines recent employment trends in the sector, specifically highlighting how the sector has evolved.

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more jobs in 2016 than in 2010

## HISTORICAL EMPLOYMENT TRENDS

Clean Energy employment in San Diego County suffered during the 2007–2009 recession, but has recovered steadily since its worst point in 2010. While recovering at approximately the same speed, San Diego did not fall as sharply as California in 2010, so is closer to returning to pre-recession employment levels.



## CLEAN ENERGY FAST FACTS



10,107 establishments related to Clean Energy in 2016



107,333 overall jobs in 2016



Apprenticeships in the building trades are a well-respected entry point into this field



Clean Energy jobs in San Diego have average earnings of \$91,877 per year



### DID YOU KNOW?

Clean Energy employment can be found all over San Diego County, with 60 percent of jobs found in Metropolitan San Diego, 21 percent found in North County, 19 percent in East County and 5 percent in South County.



## GENERAL RECOMMENDATIONS

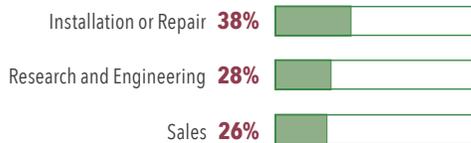
- Education and training providers should work with employers to define training needs at the subsector level. Since Clean Energy occupations are not well-defined by traditional classification systems, employers can provide insight into emerging opportunities and needs.
- Many companies who would be considered part of the Clean Energy industry do not self-identify that way. This makes gathering employer data and finding employer partners more difficult, and makes it hard for job seekers to identify opportunities in the industry. This can be improved if more work is done to educate and unite employers in their Clean Energy roles, creating broader recognition both from within and outside the industry. The workforce development community should consider re-defining this industry.

## KEY CLEAN ENERGY OCCUPATIONS IN SAN DIEGO COUNTY, 2016

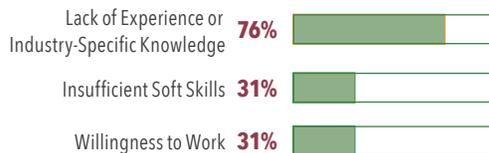
OCCUPATIONS	TYPICAL ENTRY-LEVEL EDUCATION	2016 JOBS IN INDUSTRY	2013-2016 IN-INDUSTRY CHANGE	MEDIAN HOURLY EARNINGS
Electricians	High school diploma or equivalent	5,046	17%	\$29.72
Construction Laborers	No formal educational credential	4,726	19%	\$17.03
Civil Engineers	Bachelor's degree	3,514	11%	\$42.66
Construction Manager	Bachelor's degree	2,648	16%	\$42.20
HVAC Installers	Postsecondary non-degree award	1,727	28%	\$26.26
Electrical and Electronics Engineers	Bachelor's degree	1,327	15%	\$56.05
Business Operations Specialists	Bachelor's degree	1,055	4%	\$35.37
Construction and Building Inspectors	High school diploma or equivalent	436	10%	\$36.61
Paving, Surfacing and Tamping Equipment Operators	High school diploma or equivalent	307	17%	\$25.30

### HIRING CHALLENGES

The positions most frequently identified by employers as hardest to fill are:



The most frequently cited reasons for hiring difficulties are:



### SKILLS ASSESSMENT

Skills that employers say are **very important** for employees:



81%

Problem-solving and critical thinking skills



68%

Technical skills



68%

Social and verbal communication skills

Important technical skills for applicants:

- Ability to use and learn new technologies, including computer software applications. One example cited by employers is Building Information Modeling, or BIM software.
- For Clean Energy occupations in building trades, many employers look for journeymen who have completed successful apprenticeships.

These professional certifications are important to some Clean Energy employers:

- North American Board of Certified Energy Practitioners (NABCEP)
- Solar PV Installer Certification
- Certified Energy Manager (CEM)
- Occupational Health and Safety Administration (OSHA)



### RECOMMENDATIONS FOR JOB SEEKERS

- This sector is a great fit for job seekers interested in the environment and working with their hands. Many occupations in this sector focus on certifications/apprenticeship programs/exams in addition to educational requirements, so use job descriptions to figure out which will be relevant for you. While many government-related occupations in this sector require exams, licensing and education, other companies are focused more on licensing and certifications, and in some cases passing exams.
- Its important to keep a finger on the pulse of the sector as technology advances rapidly. Technological advancements in the industry require that employees constantly update technical skills to progress in the industry.
- Many Clean Energy occupations are very specific to the type of renewable resource being worked with. For example, water-related positions require stormwater certifications, and positions working with air quality usually need CEQA.

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