

Energy, Construction & Utilities

Inland Empire/Desert Region

September 2016



Introduction

The Strong Workforce Program (SWP) legislation calls for a “regional planning process” that identifies regional priorities for SWP investments, based on labor market data. The overall purpose of the regional planning process is to inform the investments of “local share” SWP funds by individual community colleges and “regional share” investments by colleges working together.

Organized by occupational cluster, this report provides regional labor market demand data for occupations that are relevant to community college-level education and training programs. The report also provides regional supply data for community colleges and other education and training provider programs, for related occupations.

Given the innate challenges with employment forecasting, the data in this report may not accurately reflect the current regional labor market. Therefore, it is recommended that this report and any specific data within it be used as a starting point for dialogue with stakeholders in the regional planning process, as opposed to an end point that will determine investment decisions.

The next step is to engage with industry, employers and other stakeholders to explore potential issues, identify supporting evidence and develop solutions. Combined, these steps will help generate workforce priorities that are critical to the region’s growth and prosperity.

The intent of this report is to help stimulate discussion between community colleges and their regional partners to identify pressing workforce needs and challenges.

About the Data

The occupations included in this report are those most relevant to community college education and training. It should be noted that the same occupation may exist across a variety of industries in a region. Occupations are classified using Standard Occupational Classification (SOC) codes. The term “industry” is defined as a group of businesses that produce similar goods and services, and share similar production processes for creating the goods and services they sell. Industries are classified using the North American Industry Classification System (NAICS) codes.

Community college programs were identified for each occupation using the Taxonomy of Programs (TOP) coding system and are included in this report. Other educational institutional programs were identified using the Classification of Instructional Programs (CIP) and then cross walked to TOP codes. Program and award data represent the potential supply of students to the labor market for the related group of occupations. Please see Appendix A: Methodology and Data Sources, Key Terms and Definitions for more information. Appendix A is located in the Regional Labor Market Assessment report dated September 2016.

Industry

Fourteen Doing What Matters Energy, Construction & Utilities industries were identified in the Inland Empire/Desert Region. The land subdivision industry—which consists of establishments primarily engaged in servicing land and subdividing property into lots for subsequent sale to builders—is projected to grow by 34% between 2015 to 2020, adding 361 jobs. Building finishing contractors will undergo 10% growth, adding 2,234 jobs. Waste collection jobs will increase by 19%, while projections for utilities system construction businesses show 13% expansion.

Table 1: Industries in the Energy, Construction & Utilities Group

| Energy, Construction & Utilities Industries (NACIS) | 2015 Jobs | 2015 - 2020 Change | 2015 - 2020 % Change | 2016 Location Quotient | 2015 Establishments | Current Total Earnings |
|---|-----------|--------------------|----------------------|------------------------|---------------------|------------------------|
| Building Equipment Contractors (2382) | 23,610 | 2,709 | 11% | 1.1 | 1,874 | \$57,606 |
| Building Finishing Contractors (2383) | 21,728 | 2,234 | 10% | 2.0 | 1,250 | \$37,539 |
| Foundation, Structure and Building Exterior Contractors (2381) | 19,372 | 263 | 1% | 2.1 | 916 | \$47,691 |
| Residential Building Construction (2361) | 15,468 | 225 | 1% | 1.4 | 1,391 | \$40,507 |
| Other Specialty Trade Contractors (2389) | 14,057 | 248 | 2% | 1.4 | 708 | \$44,761 |
| Utility System Construction (2371) | 6,642 | 885 | 13% | 1.3 | 209 | \$89,722 |
| Non-residential Building Construction (2362) | 6,421 | 129 | 2% | 0.8 | 382 | \$69,894 |
| Electric Power Generation, Transmission and Distribution (2211) | 3,347 | (144) | (4%) | 0.8 | 58 | \$140,728 |
| Highway, Street and Bridge Construction (2373) | 3,286 | (208) | (6%) | 1.0 | 76 | \$94,967 |
| Waste Collection (5621) | 2,382 | 450 | 19% | 1.3 | 105 | \$61,780 |
| Natural Gas Distribution (2212) | 1,496 | 32 | 2% | 1.3 | 31 | \$119,040 |
| Other Heavy and Civil Engineering Construction (2379) | 1,344 | 81 | 6% | 1.1 | 45 | \$72,832 |
| Remediation and Other Waste Management Services (5629) | 1,292 | 149 | 12% | 0.9 | 88 | \$59,561 |
| Land Subdivision (2372) | 1,059 | 361 | 34% | 2.2 | 56 | \$102,073 |

Source: EMSI

Occupations

The Regional Labor Market Report for the Inland Empire/Desert Region focuses on occupations with a typical entry-level education that can be acquired by attending community college and occupations in which at least a third of the current workforce holds a postsecondary degree or award. Table 2 contains the top 10 occupations from the Regional Labor Market Report sorted by the percent of total jobs within each industry group. Carpenters occupations are just over 12% of the Energy, Construction & Utilities industry group, with 409 annual job openings projected during the next five years. Heating, air conditioning and refrigeration mechanic and installer is the fastest growing occupation, with nearly 13% projected growth and 154 annual job openings. The occupation of cost estimators is expected to have 121 annual openings and offers a median wage of \$29.58/hour, more than two-and-a-half times the MIT living wage of \$11.75/hour for a single adult in the region. See the Regional Labor Market Report for further details on the occupations below, including entry-level wages, education and training, and community college (supply) data.

Table 2: Select Occupations with the Most Jobs in the Energy, Construction & Utilities Industry Group

| Energy, Construction & Utilities Occupations (SOC) | 2015 Jobs | 2015 - 2020 Change | 2015 - 2020 % Change | Annual Openings | % of Total Jobs in Industry Group (2016) | Median Hourly Earnings |
|--|-----------|--------------------|----------------------|-----------------|--|------------------------|
| Carpenters (47-2031) | 16,409 | 258 | 1.6% | 409 | 12.2% | \$18.00 |
| First-Line Supervisors of Construction Trades and Extraction Workers (47-1011) | 6,627 | 168 | 2.5% | 145 | 4.7% | \$27.70 |
| Electricians (47-2111) | 6,301 | 654 | 10.4% | 245 | 4.4% | \$24.40 |
| Plumbers, Pipefitters and Steamfitters (47-2152) | 4,444 | 493 | 11.1% | 166 | 3.3% | \$21.04 |
| Heating, Air Conditioning and Refrigeration Mechanics and Installers (49-9021) | 3,550 | 456 | 12.8% | 154 | 2.3% | \$22.79 |
| Operating Engineers and Other Construction Equipment Operators (47-2073) | 3,413 | 179 | 5.2% | 105 | 2.0% | \$27.90 |
| Heavy and Tractor-Trailer Truck Drivers (53-3032) | 31,085 | 3,706 | 11.9% | 1,330 | 1.8% | \$20.88 |
| Secretaries and Administrative Assistants, Except Legal, Medical and Executive (43-6014) | 20,909 | 1,571 | 7.5% | 551 | 1.6% | \$17.42 |

Energy, Construction & Utilities in the Inland Empire/Desert Region

| Energy, Construction & Utilities Occupations (SOC) | 2015 Jobs | 2015 - 2020 Change | 2015 - 2020 % Change | Annual Openings | % of Total Jobs in Industry Group (2016) | Median Hourly Earnings |
|---|-----------|--------------------|----------------------|-----------------|--|------------------------|
| Cost Estimators (13-1051) | 2,597 | 144 | 5.5% | 121 | 1.5% | \$29.58 |
| Bookkeeping, Accounting and Auditing Clerks (43-3031) | 14,662 | 406 | 2.8% | 231 | 1.3% | \$18.10 |

Source: EMSI

Community College Supply

The number of students completing community college programs related to Energy, Construction & Utilities was analyzed to determine if postsecondary institutions are supplying enough students to meet workforce demand. Table 3 shows the projected 2015-2020 annual job openings for the occupations in Table 2 with an associated TOP6 program. For the same five-year period, Table 3 shows the annual average student headcounts, annual average regional community college awards and the total annual average awards for education institutions outside of the California Community Colleges system. Please note, an award is not equivalent to a single person in search of a job opening since students may earn more than one award, such as a degree in addition to a certificate.

Table 3: Job Openings, Program Headcounts and Program Awards Related to Energy, Construction & Utilities

| Energy, Construction & Utilities Occupations | Annual Openings (2015-20) | Program - TOP6 | Annual Avg Headcount at CCCs (2012-15) | Total Annual Avg Awards (2012-15) | Total Other Ed. Annual Avg Awards (2012-15) |
|--|---------------------------|--|--|-----------------------------------|---|
| Cost Estimators (13-1051) | 121 | Business and Commerce, General - 50100 | 5,846 | 168 | 46 |
| | | Business Administration - 50500 | 3,336 | 412 | 48 |
| | | Business Management - 50600 | 4,310 | 181 | 0 |
| | | Construction Crafts Technology - 95200 | 492 | 11 | 0 |
| Bookkeeping, Accounting and Auditing Clerks (43-3031) | 231 | Accounting - 50200 | 7,534 | 213 | 36 |
| Secretaries and Administrative Assistants, Except Legal, Medical and Executive (43-6014) | 551 | Office Technology/Office Computer Applications - 51400 | 5,631 | 101 | 194 |
| First-Line Supervisors of Construction Trades and Extraction Workers (47-1011) | 145 | Construction Crafts Technology - 95200 | 492 | 11 | 0 |
| | | Carpentry - 95210 | 69 | 0 | 0 |
| | | Electrical - 95220 | 92 | 0 | 83 |
| | | Glazing - 95240 | 0 | 0 | 0 |
| | | Masonry, Tile, Cement, Lath and Plaster - 95260 | 34 | 0 | 0 |
| | | Painting, Decorating and Flooring - 95270 | 0 | 0 | 0 |
| | | Drywall and Insulation - 95280 | 0 | 0 | 0 |
| | | Roofing - 95290 | 0 | 0 | 0 |
| | | Civil and Construction Management Technology - 95700 | 104 | 3 | 41 |
| Public Works - 210210 | 0 | 1 | 0 | | |
| Carpenters (47-2031) | 409 | Construction Crafts Technology - 95200 | 492 | 11 | 0 |
| | | Carpentry - 95210 | 69 | 0 | 0 |

Energy, Construction & Utilities in the Inland Empire/Desert Region

| Energy, Construction & Utilities Occupations | Annual Openings (2015-20) | Program - TOP6 | Annual Avg Headcount at CCCs (2012-15) | Total Annual Avg Awards (2012-15) | Total Other Ed. Annual Avg Awards (2012-15) |
|--|---------------------------|--|--|-----------------------------------|---|
| Operating Engineers and Other Construction Equipment Operators (47-2073) | 105 | Heavy Equipment Operation - 94730 | 0 | 0 | 0 |
| Electricians (47-2111) | 245 | Electrical - 95220 | 92 | 0 | 83 |
| Plumbers, Pipefitters and Steamfitters (47-2152) | 166 | Plumbing, Pipefitting and Steamfitting - 95230 | 40 | 0 | 0 |
| Heating, Air Conditioning and Refrigeration Mechanics and Installers (49-9021) | 154 | Environmental Control Technology - 94600 | 585 | 71 | 0 |
| | | Energy Systems Technology - 94610 | 122 | 0 | 242 |
| Heavy and Tractor-Trailer Truck Drivers (53-3032) | 1,330 | Truck and Bus Driving - 94750 | 0 | 0 | 0 |

Source: EMSI, MIS, Data Mart, Center of Excellence TOP-CIP-SOC