



**ECONOMIC &
WORKFORCE
DEVELOPMENT**
through the
CALIFORNIA
COMMUNITY
COLLEGES

**BUSINESS AND WORKFORCE
PERFORMANCE IMPROVEMENT INITIATIVE**



**Occupational Profile Report
For College of the Desert**

Certified Electricians



**Inland Empire Center of Excellence
San Bernardino Community College District**

April 2007



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Certified Electricians

April 2007

Prepared By:

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Riverside and San Bernardino Counties

San Bernardino Community College District

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THE BUSINESS AND WORKFORCE PERFORMANCE IMPROVEMENT INITIATIVE IS A GRANT-FUNDED PROJECT THROUGH THE ECONOMIC & WORKFORCE DEVELOPMENT PROGRAM OF THE CALIFORNIA COMMUNITY COLLEGES. OUR MISSION IS TO STRENGTHEN CALIFORNIA'S WORKFORCE AND ADVANCE ECONOMIC GROWTH THROUGH EDUCATION, TRAINING AND JOB DEVELOPMENT.

Scope of Report

This Occupational Profile Report provides basic occupational information, projections, wages, and skills needed for Certified Electricians. Employees with this occupation may also be titled Electrician, Journeyman Electrician, Inside Wireman, or Maintenance Electricians.

This report only includes data for the Coachella Valley and the College of the Desert's service area (and defined by zip codes). The data and information herein is NOT for all of Riverside county; nor for the entire Riverside-San Bernardino-Ontario MSA.

The zip codes included in this report are:

92201, 92203, 92210, 92211, 92230,
92234, 92236, 92240, 92241, 92253,
92254, 92260, 92262, 92264, 92270,
92274, 92276, 92282, 92536, 92539,
92549, 92561

Job Description & Primary Tasks

The standard job description for Electricians (SOC 47-2111) is to:

Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.

Primary Tasks for electricians include:

- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Connect wires to circuit breakers, transformers, or other components.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Advise management on whether continued operation of equipment could be hazardous.
- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Maintain current electrician's license or identification card to meet governmental regulations.
- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.

- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.

Required Knowledge & Skills

The required knowledge to become a successful Electrician includes:

- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Public Safety and Security — Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

The required skill sets include:

- Installation — Installing equipment, machines, wiring, or programs to meet specifications.
- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- Troubleshooting — Determining causes of operating errors and deciding what to do about it.
- Equipment Selection — Determining the kind of tools and equipment needed to do a job.
- Repairing — Repairing machines or systems using the needed tools.
- Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Time Management — Managing one's own time and the time of others.
- Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.
- Mathematics — Using mathematics to solve problems.

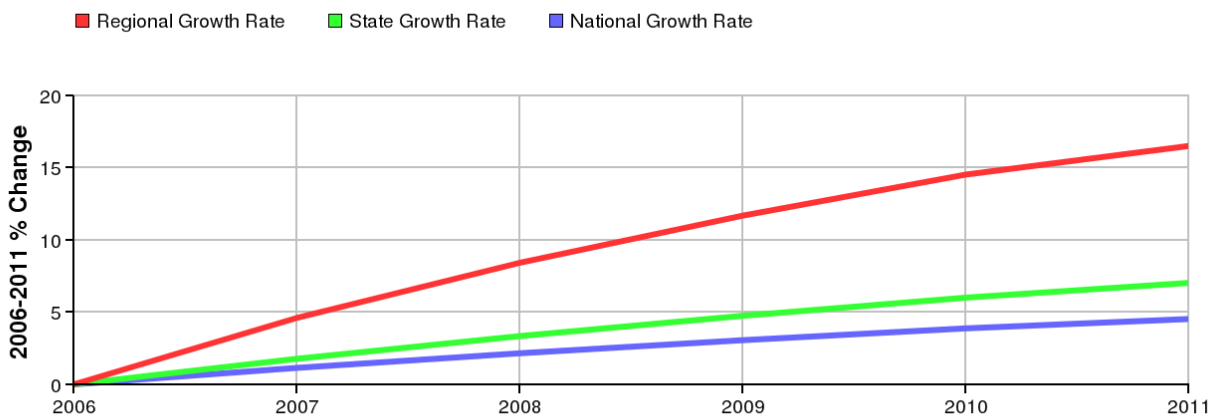
Occupational Information

While the Coachella Valley can expect a 16.5% increase in Electricians between 2006 and 2011, that only equates to 153 new jobs over that 5 year period (Annual increase: 31).

Basic Information	
2006 Occupational Jobs	924
2011 Occupational Jobs	1,077
Total Change	153
Total % Change	16.5%
2006 Median Hourly Earnings/Worker	\$19.24

This increase far outpaces the rest of the state, as well as the nation, in projected Electrician growth.

Occupational Change Summary



Source: CCbenefits, 2007

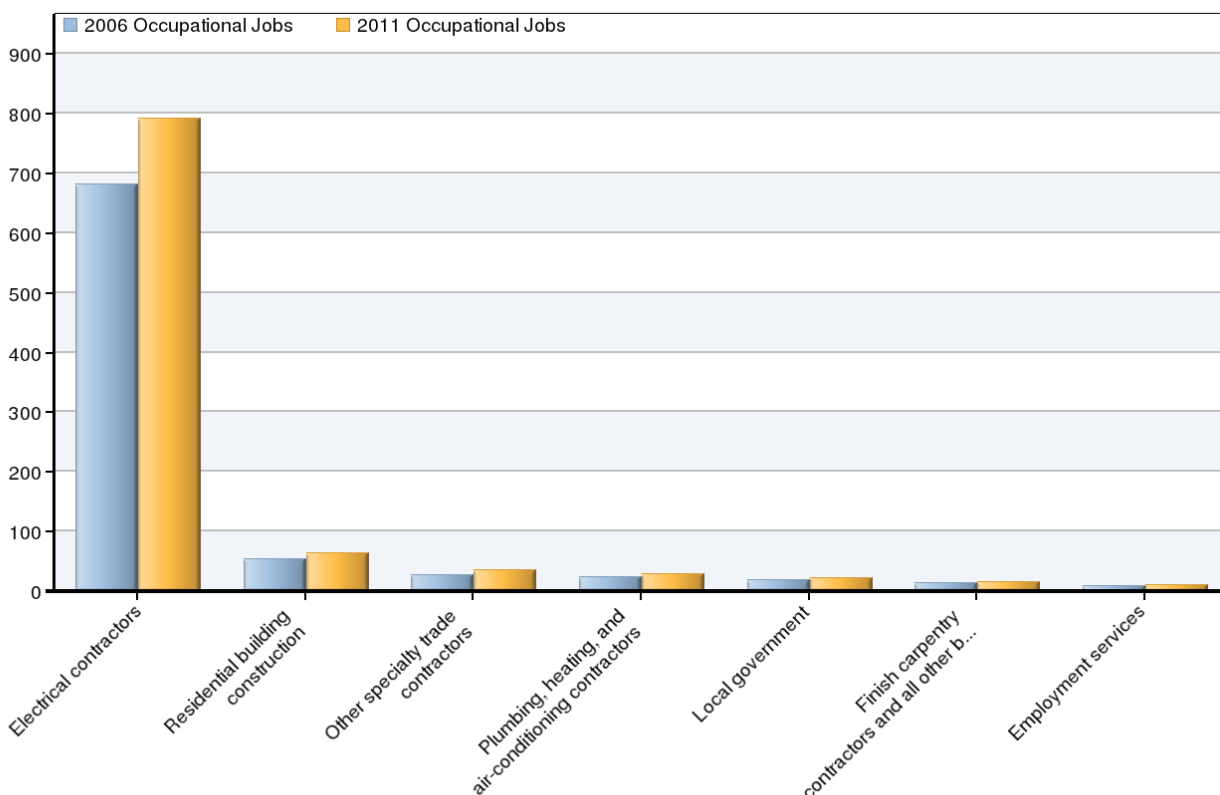
Region	2006 Jobs	2011 Jobs	Change	% Change	Hourly EPW
COD Service Area Total	924	1,077	153	16%	\$19.24
State Total	76,816	82,210	5,395	7%	\$21.60
National Total	772,373	807,304	34,931	5%	\$20.46

Source: Economic Modeling Specialists, Inc. - 4/07

Top Industries for Electricians

As classified by the North American Industry Classification System (NAICS) codes, the following illustrate the top seven industries that employ Electricians within College of the Desert's service area. As common sense would dictate, the Electrical Contractors industry (NAICS 23821) employs the most Electricians.

Top Industries for Selected Occupation



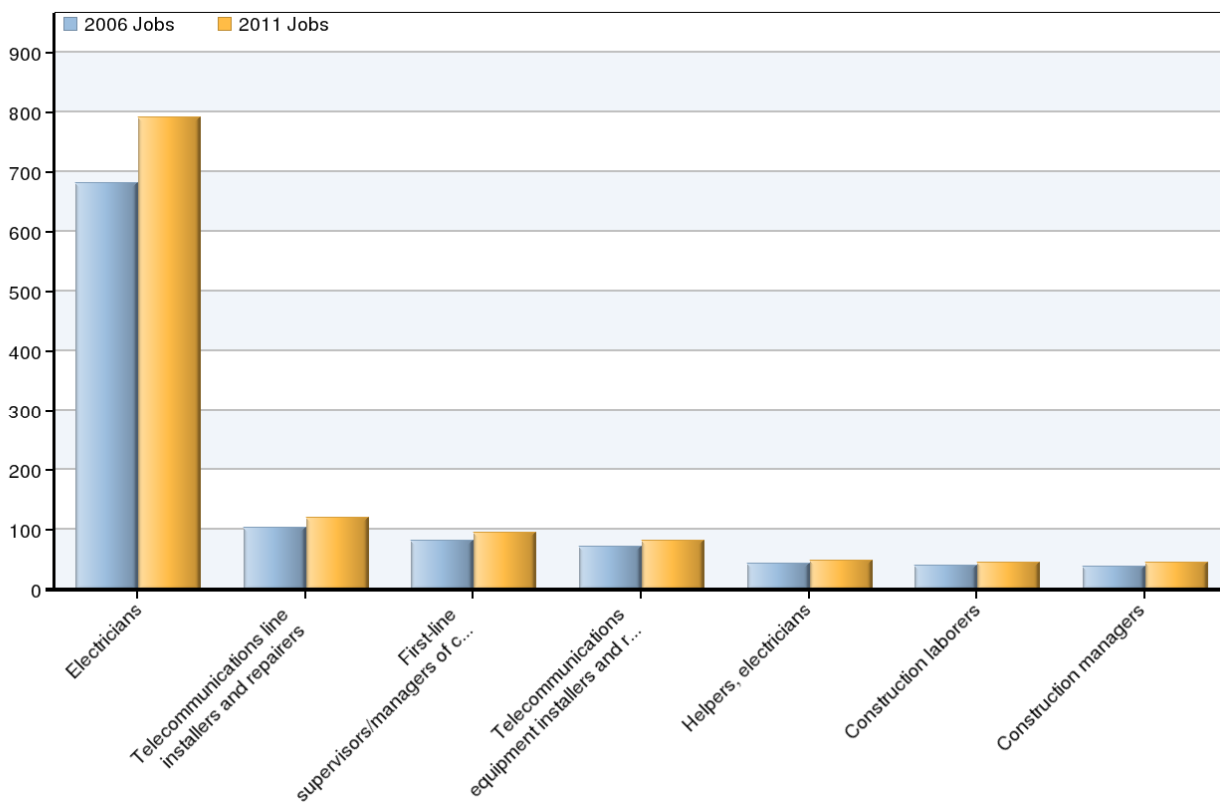
Source: CCbenefits, 2007

NAICS Code	Name	2006 Jobs	2011 Jobs	Change	% Change
23821	Electrical contractors	681	792	111	16%
23610	Residential building construction	54	64	10	18%
23890	Other specialty trade contractors	27	34	7	26%
23822	Plumbing, heating, and air-conditioning contractors	23	28	5	22%
93000	Local government	19	22	3	16%
2383A	Finish carpentry contractors and all other building finishing contractors	13	15	2	16%
56130	Employment services	9	10	1	11%

Source: Economic Modeling Specialists, Inc. - 4/07

Electrical Contractors

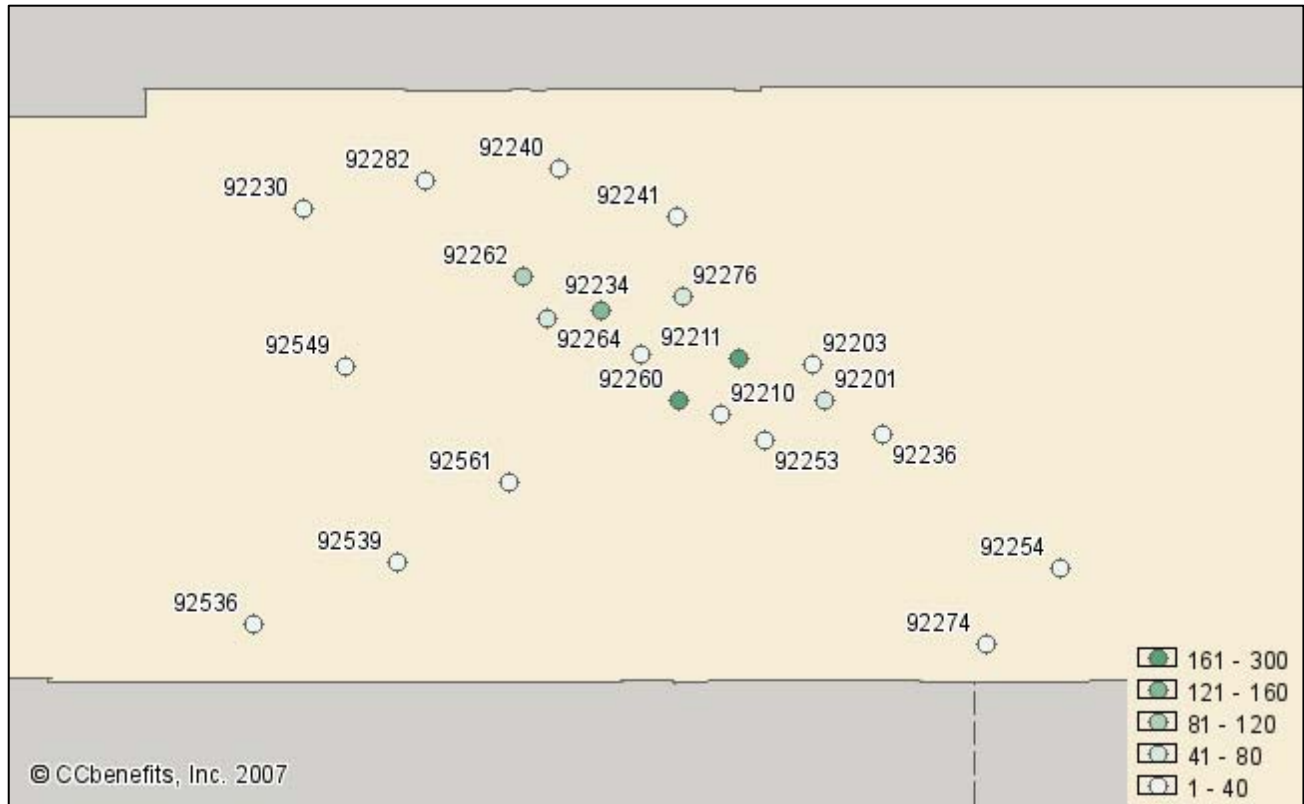
The Electrical Contractors industry (NAICS 23821) employed 1,537 individuals in 2006. the top seven occupations within the industry are:



Source: CCbenefits, 2007

SOC Code	Name	2006 Jobs	2011 Jobs	Change	% Change
47-2111	Electricians	681	792	111	16%
49-9052	Telecommunications line installers and repairers	103	119	17	16%
47-1011	First-line supervisors/managers of construction trades and extraction workers	82	95	13	15%
49-2022	Telecommunications equipment installers and repairers, except line installers	71	82	12	16%
47-3013	Helpers, electricians	44	49	4	10%
47-2061	Construction laborers	41	45	5	12%
11-9021	Construction managers	39	45	6	14%

Regional Occupational Concentration



ZIP Code	2006 Jobs
92211	203
92260	165
92234	134
92262	87
92201	74
92264	61
92276	45
92236	37
92270	35
92253	27
92241	12
92274	
92210	
92203	
92549	
92536	
92539	
92240	
92254	
92561	
92282	
92230	

Apprentices and Other Sources

There are 9 recognized apprenticeable specialties associated with this occupation:

1. Protective-Signal Repairer
2. Electrician (Water Transportation)
3. Electrician (Construction)
4. Protective-Signal Installer
5. Street-Light Servicer
6. Electrician, Maintenance
7. Neon-Sign Servicer
8. Electrician (Ship-Boat Manufacturing)
9. Residential Wireman

Sources that provide additional information on related jobs, specialties, and/or industries:

Home Builders Institute

1201 15th St. NW, Washington, DC 20005
Phone: (800) 795-7955. Fax: (202) 266-8999

Independent Electrical Contractors, Inc.

4401 Ford Ave., Suite 1100, Alexandria, VA 22302
Phone: (703) 549-7351. Fax: (703) 549-7448

International Brotherhood of Electrical Workers

1125 15th St. NW, Washington, DC 20005
Phone: (202) 833-7000. Fax: (202) 467-6316

National Association of Home Builders

1201 15th St. NW, Washington, DC 20005
Phone: (800) 368-5242

National Electrical Contractors Association

3 Metro Center, Suite 1100, Bethesda, MD 20814
Phone: (301) 657-3110. Fax: (301) 215-4500

National Joint Apprenticeship Training Committee

301 Prince George's Blvd., Upper Marlboro, MD 20774

APPENDIX A: GIS Map



Riverside County Community College Service Areas - by Zip Code

