Electrical Installer and Repairer Occupations

Labor Market Analysis: San Diego County **November 2026**

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL(S) OF EDUCATION
Proceed	☑	☑	☐ Doctorate Degree ☐ Master's Degree ☐ Bachelor's Degree ☐ Associate degree ☑ Some College or Certificate ☑ HS Diploma or Equivalent ☐ Less Than a HS Diploma ☐ Apprenticeship
SUPPORT FOR PROGRAM MODIFICATION?	**NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING**	**NUMBER OF ANNUAL JOB OPENINGS**	
☑	LOW	MEDIUM	

The San Diego & Imperial Center of Excellence (COE) developed this brief to assist the region's community colleges with strategic planning and program development. Electrical Installer and Repairer Occupations include "Electrical and Electronics Repairers, Powerhouse, Substation, and Relay" and "Electrical Power-Line Installers and Repairers." According to available data, Electrical Installer and Repairer Occupations in San Diego County have a labor market demand of 83 annual job openings (while average demand for a single occupation in San Diego County is 289 annual job openings), and one institution supplies an estimated 24 awards for these occupations. On average, entry-level wages are above the living wage. This brief recommends that colleges proceed with developing a new program and supports a program modification because 1) there is a supply gap; 2) entry-level wages are above the living wage; and 3) one institution in San Diego County supplies awards for these occupations.

Introduction

This report provides labor market information in San Diego County for the following occupational codes in the Standard Occupational Classification (SOC)[1] system:

- **Electrical and Electronics Repairers, Powerhouse, Substation, and Relay** (SOC 49-2095): Inspect, test, repair, or maintain electrical equipment in generating stations, substations, and in-service relays.
- **Electrical Power-Line Installers and Repairers** (SOC 49-9051): Install or repair cables or wires used in electrical power or distribution systems. May erect poles and light or heavy duty transmission towers.

For the purpose of this report, these occupations are referred to as *Electrical Installer and Repairer Occupations*.

Projected Occupational Demand

Between 2025 and 2030, businesses in San Diego County will need to hire 83 employees annually to fill new jobs and backfill positions made vacant through turnover and retirement (Exhibit 1). Electrical Power-Line Installers and Repairers account for larger share of demand, with 63 annual openings. Overall employment is projected to increase by 22 jobs, or 2 percent, during the five-year period.

Exhibit 1: Employment Change and Occupational Demand for Electrical Installer and Repairer Occupations in San Diego County (2025-2030)[2]

Occupational Title	2025 Jobs	2030 Jobs	2025-2030 Net Jobs Change	2025-2030 % Jobs Change	Annual Job Openings (Demand)
Electrical Power-Line Installers and Repairers	787	802	15	2%	63
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	233	240	7	3%	20
Total	**1,020**	**1,042**	**22**	**2%**	**83**

[1] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for collecting, calculating, and disseminating data. bls.gov/soc
[2] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.

Earnings

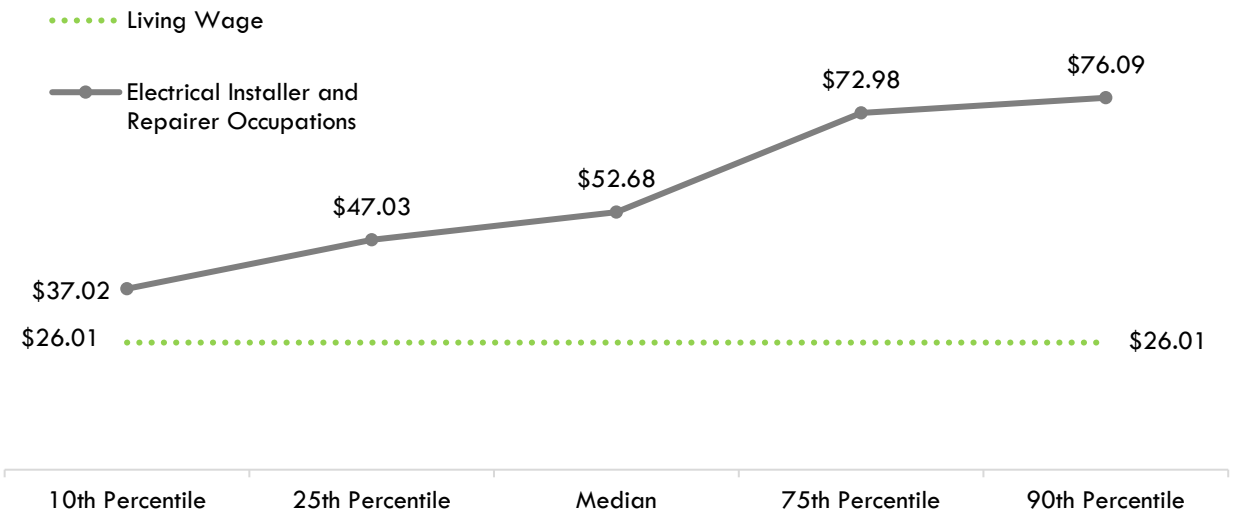
According to traditional[3] labor market information (LMI), entry-level hourly earnings for *Electrical Installer and Repairer Occupations* range from $46.54 to $47.53 (Exhibit 2).

Exhibit 2: Hourly Earnings for Electrical Installer and Repairer Occupations in San Diego County[4]

Occupational Title	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	$47.53	$47.53	$70.22
Electrical Power-Line Installers and Repairers	$46.54	$57.83	$75.74

On average, entry-level hourly earnings for *Electrical Installer and Repairer Occupations* are $47.03—or approximately $97,822 annually[5]. This is above the living wage of $26.01 per hour for a single adult in San Diego County (Exhibit 3).[6]

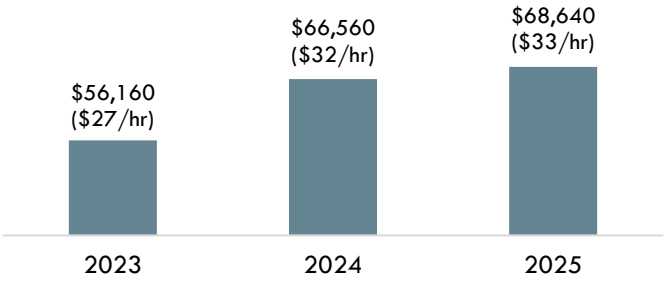
Exhibit 3: Average Hourly Earnings[7] for Electrical Installer and Repairer Occupations in San Diego County[8]



[3] Traditional LMI is generally historical data captured by the U.S. Bureau of Labor Statistics (BLS) or the California Employment Development Department (EDD). It does not account for recent technological, economic, or legislative changes that may affect labor market demand and wages.
[4] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.
[5] Annualized salaries assume a full-time position with 2,080 work hours. Multiplying the hourly wage by 2,080 yields the annual salary.
[6] Center for Women's Welfare, University of Washington. The Self-Sufficiency Standard for California 2024. selfsufficiencystandard.org/california
[7] The 10th and 25th percentiles may be considered entry-level wages; the 75th and 90th percentiles may be considered experienced wages.
[8] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed. Wage percentiles are averaged equally across the two occupations.

In online job postings, employers also advertised between $27 and $33 per hour between January 1, 2023 and December 31, 2025 for *Electrical Installer and Repairer Occupations* in San Diego County (Exhibit 4).[9] This suggests that employer-advertised wages in online job postings were lower than entry-level wages reported in traditional labor market information and increased over the period analyzed.

Exhibit 4: Entry-Level Advertised Salaries in Online Job Postings for Electrical Installer and Repairer Occupations in San Diego County (2023-2025)



*Hourly wages are rounded to the nearest dollar amount.

[9] Lightcast Q4 2026; Job Posting Analytics, January 2023 through December 2025. Annual advertised entry-level wages are unweighted occupational means.

Expected Level of Education

According to traditional LMI reported to the California Employment Development Department and U.S. Bureau of Labor Statistics, *Electrical Installer and Repairer Occupations* typically require either a high school diploma or equivalent or a postsecondary non-degree award for entry-level employment (Exhibit 5).[10] Electrical and Electronics Repairers, Powerhouse, Substation, and Relay also typically require less than five years of related work experience.

Exhibit 5: National Educational Attainment for Electrical Installer and Repairer Occupations[11]

Occupational Title	Typical Entry-Level Education
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	Postsecondary non-degree award
Electrical Power-Line Installers and Repairers	High school diploma or equivalent

Similarly, a High school or GED was the most requested minimum educational requirement in online job postings for *Electrical Installer and Repairer Occupations* in San Diego County between January 1, 2023 and December 31, 2025. Employers did not expect any certifications (Exhibit 6).[12]

Exhibit 6: Top Certifications for Electrical Installer and Repairer Occupations in San Diego County in Online Job Postings (2023-2025)[13]

1. N/A

[10] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.
[11] Lightcast Q3 2026; QCEW, Non-QCEW, Self-Employed.
[12] Lightcast Q4 2026; Job Posting Analytics, January 2023 through December 2025.
[13] Lightcast Q4 2026; Job Posting Analytics, January 2023 through December 2025. Valid Driver's License was excluded from this exhibit.

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. There are one TOP code and one CIP code related to *Electrical Installer and Repairer Occupations* (Exhibit 7).

Exhibit 7: Related TOP and CIP Codes for Electrical Installer and Repairer Occupations

TOP or CIP Code	TOP or CIP Program Title
TOP 0934.40	Electrical Systems and Power Transmission
CIP 46.0301	Electrical and Power Transmission Installation/Installer, General

According to TOP data, one community colleges supplies the region with awards for these occupations: San Diego City College. According to CIP data, no non-community-college institutions supplies the region with awards. San Diego City College confer an average of 24 awards annually (Exhibit 8).

Exhibit 8: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Three-Year Annual Averages)[14],[15]

TOP or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards	Other Institutions 3-Yr Annual Average Awards	Total Average Supply
0934.40	Electrical Systems and Power Transmission	**24**	**0**	**24**
	San Diego City	**24**	**0**	
	• Associate Degree	6	0	
	• Certificate 16 < 30 units	17	0	
	• Certificate 30 < 60 units	1		
46.0301	Electrical and Power Transmission Installation/Installer, General	**0**	**0**	**0**
	Total	**24**	**0**	**24**

[14]California Community Colleges Chancellor's Office Data Mart, program years 2022-23 through 2024-25.
[15]National Center for Education Statistics, Integrated Postsecondary Education Data System completions, academic years 2021-22 through 2023-24.

Demand vs. Supply

Comparing labor demand with labor supply[16] suggests that there is a supply gap for these occupations in San Diego County, with 83 annual openings and 24 average annual awards. Comparatively, there are 1,014 annual openings in California and 200 annual awards, suggesting a statewide supply gap (Exhibit 9).[17]

Exhibit 9: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	**Supply** (Average Annual Awards)	**Supply Gap or Oversupply**
San Diego	83	24	**59**
California	1,014	200	**814**

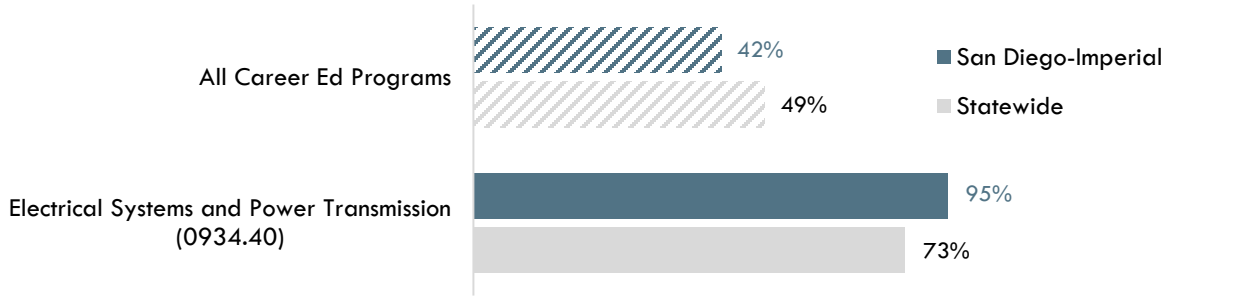
Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

[16]Labor supply is estimated from California Community Colleges Chancellor's Office Data Mart TOP-coded awards and Integrated Postsecondary Education Data System CIP-coded completions.
[17] "Supply and Demand," Centers of Excellence Student Outcomes, coeccc.net/our-resources.

Student Outcomes and Regional Comparisons

According to the California Community Colleges DataVista, 95 percent of students in the San Diego-Imperial region earned a living wage after exiting *Electrical Systems and Power Transmission (TOP 0934.40)*, compared to 73 percent statewide and 49 percent of students in Career Education programs in general across the state (Exhibit 10).[18]

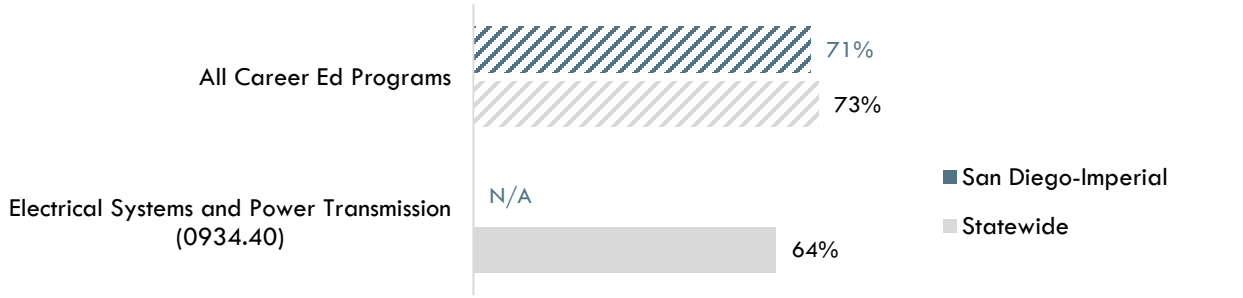
Exhibit 10: Percentage of Students Who Earned a Living Wage in an Electrical Systems and Power Transmission (TOP 0934.40) program, PY2023-24[19]



"N/A" indicates insufficient data

According to the California Community Colleges DataVista, there is insufficient data for students in the San Diego-Imperial region who obtained a job closely related to their field of study after exiting *Electrical Systems and Power Transmission (TOP 0934.40)*, compared to 64 percent statewide and 73 percent of students in Career Education programs in general across the state (Exhibit 11).[20]

Exhibit 11: Percentage of Students in a Job Closely Related to Field of Study in an Electrical Systems and Power Transmission (TOP 0934.40) program, PY2022-23[21]



"N/A" indicates insufficient data

[18] California Community Colleges DataVista. datavista.cccco.edu
[19]Most recent year with available data is Program Year 2023–24. The measure reports the percentage of exiting students who did not transfer and had unemployment-insurance-covered employment whose annualized second-quarter earnings reached the county living wage.
[20] California Community Colleges DataVista. datavista.cccco.edu
[21]Most recent year with available data is Program Year 2022–23. The measure reports the percentage of CTE Outcomes Survey respondents employed in the same or a similar field as their program of study.

Employers

Between January 1, 2023 and December 31, 2025, the top employers in San Diego County for *Electrical Installer and Repairer Occupations* included UtiliQuest, Kanaan Communications, Vci Construction, Apple and Electric Power Systems based on online job postings (Exhibit 12).

Exhibit 12: Top Employers for Electrical Installer and Repairer Occupations in San Diego County[22]

Top Employers	
• UtiliQuest • Kanaan Communications • VCI Construction • Apple • Electric Power Systems	• Siemens Energy • Vertiv • VCI • EPS GmbH & Co. KG • San Diego Metropolitan Transit System

Skills

Exhibit 13 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2023 and December 31, 2025.

Exhibit 13: Top Skills for Electrical Installer and Repairer Occupations in San Diego County[23]

Specialized Skills	Soft Skills	Software Skills
• Construction • Underground Utilities • Excavation • Hand Tools • Good Driving Record • Landscaping • Pest Control • Wrenches • Surveying • Meter Reading	• Communication • Troubleshooting • Problem Solving	• N/A

[22] Lightcast Q4 2026; Job Posting Analytics, January 2023 through December 2025.
[23] Lightcast Q4 2026; Job Posting Analytics, January 2023 through December 2025. Skills must populate in at least 10% of job postings to be listed.

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