

Heating, Air Conditioning, and Refrigeration Mechanics and Installers

Labor Market Analysis: Imperial County

June 2026

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL OF EDUCATION
 Do Not Proceed with New Program	 	 	☐ 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	
 	MEDIUM 	HIGH 	

The San Diego & Imperial Center of Excellence (COE) developed this brief to assist the region's community colleges with strategic planning and program development. According to available data, *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* in Imperial County have a labor market demand of 16 annual job openings (while average demand for a single occupation in Imperial County is 14 annual job openings), and one institution supplies 20 awards for this occupation, suggesting that labor market demand is being met by existing educational supply. Entry-level wages are above the living wage. This brief recommends that the colleges do not proceed with developing a new program for this occupation but supports a program modification because 1) entry-level and median earnings are above the living wage; and 2) labor market demand is being met by awards conferred through Imperial Valley College.

Introduction

This report provides labor market information in Imperial County for the following occupational code in the Standard Occupational Classification (SOC)¹ system:

Heating, Air Conditioning, and Refrigeration Mechanics and Installers (SOC 49-9021): Install or repair heating, central air conditioning, HVAC, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves. Sample reported job titles include:

- HVAC Tech
- HVAC Service Tech
- HVAC Mechanic
- HVAC Installer
- A/C Service Tech
- Refrigeration Service Technician
- Refrigeration Mechanic
- HVAC-R Service Tech
- A/C Mechanic

Projected Occupational Demand

Between 2024 and 2029, *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* are projected to increase by 19 net jobs or 14% (Exhibit 1). Employers in Imperial County will need to hire 16 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

Exhibit 1: Number of Jobs for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* (2024-2029)²

Occupational Title	2024 Jobs	2029 Jobs	2024 - 2029 Net Jobs Change	2024 - 2029 % Net Jobs Change	Annual Job Openings (Demand)
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	136	155	19	14%	16

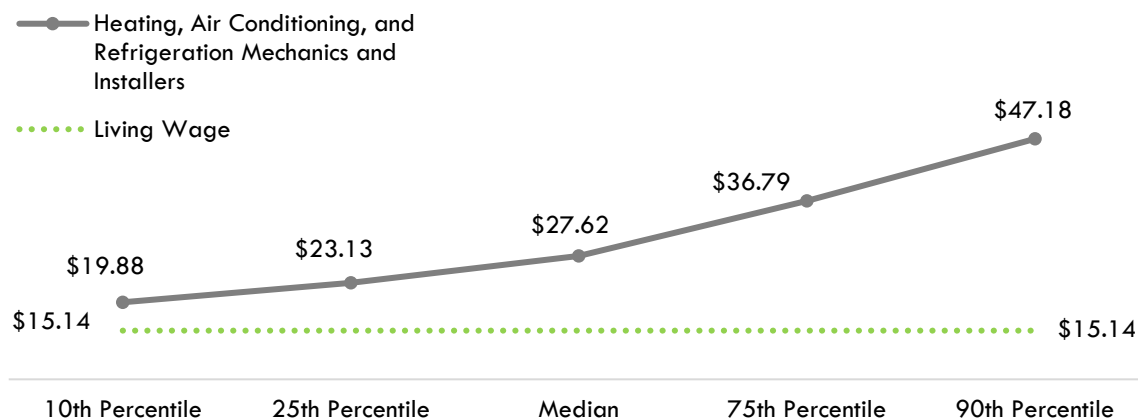
¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. <https://www.bls.gov/soc/>.

² Lightcast 2026.02; QCEW, Non-QCEW, Self-Employed.

Earnings

According to traditional³ labor market information (LMI), *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* had entry-level hourly earnings of \$23.13—or \$48,110.40 annual salary⁴; this is more than the living wage for a single adult in Imperial County, which is \$15.14 per hour (Exhibit 2).⁵

Exhibit 2: Hourly Earnings⁶ for Heating, Air Conditioning, and Refrigeration Mechanics and Installers in Imperial County⁷



Due to insufficient job postings between January 1, 2023 and December 31, 2025 no analysis of employers' advertised wages was completed for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* in Imperial County (Exhibit 3).⁸

Exhibit 3: Entry-Level Advertised Salaries in Online Job Postings for Heating, Air Conditioning, and Refrigeration Mechanics and Installers in Imperial County (2023-2025)*

N/A	N/A	N/A
2023	2024	2025

*Hourly wages are rounded to the nearest dollar amount.

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 Annualized salaries assume a full-time position with 2,080 hours. Multiplying the hourly wage with 2,080 yields the annual salary.

⁵ Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. selfsufficiencystandard.org/California.

⁶ 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.

⁷ Lightcast 2026.02; QCEW, Non-QCEW, Self-Employed.

⁸ Lightcast 2026.02; "Job Posting Analytics." 2023-2025.

Expected Level of Education

According to traditional LMI (data reported to EDD and BLS), *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* have a national educational attainment of a [postsecondary non-degree award](#) (Exhibit 4).⁹

Exhibit 4: National Educational Attainment for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers*¹⁰

Occupational Title	Typical Entry-Level Education
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Postsecondary non-degree award

Due to insufficient job postings between January 1, 2023 and December 31, 2025 in Imperial County, no analysis of most requested educational requirement and certifications were completed for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* (Exhibit 5).¹¹

Exhibit 5: Top Certifications for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* in Imperial County in Online Job Postings (2023-2025)¹²

1. N/A (insufficient job postings)

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 is [one](#) TOP code and [two](#) CIP codes related to *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* (Exhibit 6).

Exhibit 6: Related TOP and CIP Codes for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers*¹³

TOP or CIP Code	TOP or CIP Program Title
TOP 0946.00	Environmental Control Technology (HVAC)
CIP 15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician
CIP 47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician

⁹ Lightcast 2026.02; QCEW, Non-QCEW, Self-Employed.

¹⁰ Lightcast 2026.02; QCEW, Non-QCEW, Self-Employed.

¹¹ Lightcast 2026.02; "Job Posting Analytics." 2023-2025.

¹² Lightcast 2026.02; "Job Posting Analytics." 2023-2025.

¹³ This brief uses a conservative estimate of program supply and only calculates awards from the TOP code listed in Exhibit 6.

According to TOP data, **one** community college supplies the region with awards for this occupation: **Imperial Valley College**. According to CIP data, **no** non-community-college institution supplies the region with awards (Exhibit 7).

**Exhibit 7: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions
(Program Year 2021-22 Through Program Year 2024-25 Average)**

TOP6 or CIP Code	TOP6 or CIP Program Title	3-Yr Annual Average CC Awards (PY22-23 to PY24-25)	Other Educational Institutions 3- Yr Annual Average Awards (PY21-22 to PY23-24)	Total Average Supply (PY21-22 to PY24-25)
0946.00	Environmental Control Technology (HVAC)	20	0	20
	Imperial Valley	20	0	
	• Associate degree	2	0	
	• Certificate 16 < 30 units	18	0	
	• Certificate 8 < 16 units	0	0	
15.0501	Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician	0	0	0
47.0201	Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	0	0	0
Total				20

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply¹⁴ suggests that there is an **oversupply** for this occupation in Imperial County, with **16** annual openings and **20** awards. Comparatively, there are **4,013** annual openings in California and **4,296** awards, suggesting that there is an **oversupply** across the state¹⁵ (Exhibit 8).

Exhibit 8: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
Imperial	16	20	-4
California	4,013	4,296	-283

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.

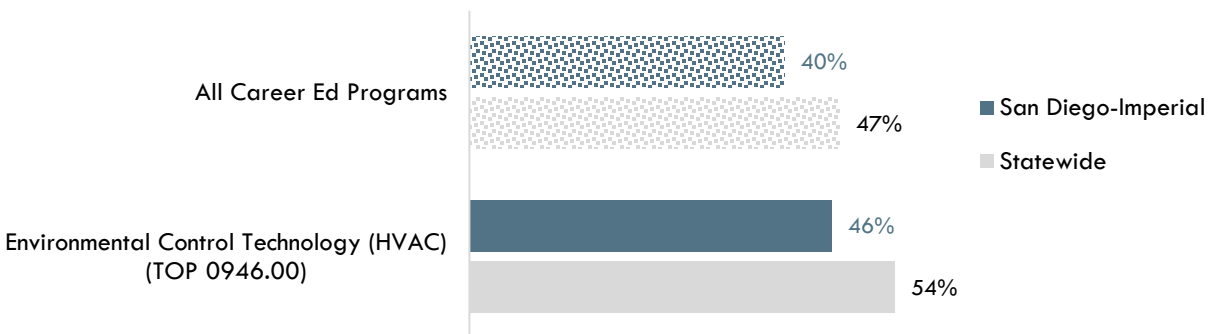
¹⁴ Labor supply can be found from two different sources: Lightcast or the California Community Colleges Chancellor's Office MIS Data Mart. Lightcast uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

¹⁵ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/our-resources.

Student Outcomes and Regional Comparisons

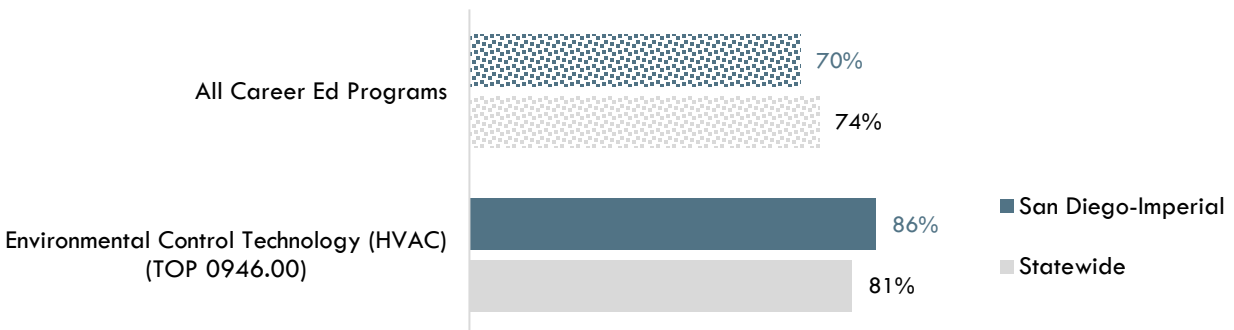
According to the California Community Colleges DataVista, 46% of students in the San Diego-Imperial region earned a living wage after completing an Environmental Control Technology (HVAC) (TOP 0946.00) program, compared to 54% statewide and 47% of students in Career Education programs in general across the state (Exhibit 9).¹⁶

Exhibit 9: Percentage of Students Who Earned a Living Wage in an Environmental Control Technology (HVAC) (TOP 0946.00) program, PY2023-24¹⁷



According to the California Community Colleges DataVista, 86% of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing an Environmental Control Technology (HVAC) (TOP 0946.00) program, compared to 81% statewide and 74% of students in Career Education programs in general across the state (Exhibit 10).¹⁸

Exhibit 10: Percentage of Students in a Job Closely Related to Field of Study in an Environmental Control Technology (HVAC) (TOP 0946.00) program, PY2022-23¹⁹



¹⁶ "DataVista, California Community Colleges, datavista.cccco.edu/.

¹⁷ Most recent year with available data is Program Year 2022-23. Among completers and skills builders who exited, the percentage of students who attained a living wage.

¹⁸ "DataVista, California Community Colleges, datavista.cccco.edu/.

¹⁹ Most recent year with available data is Program Year 2021-22. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

Employers

Due to insufficient job postings between January 1, 2023 and December 31, 2025 in Imperial County, no analysis of employers for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* were completed (Exhibit 11).

Exhibit 4: Top Employers for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* in Imperial County²⁰

Top Employers

Skills

Due to insufficient job postings between January 1, 2023 and December 31, 2025 in Imperial County, no analysis of specialized, soft, and software skills were completed (Exhibit 12).

Exhibit 5: Top Skills for *Heating, Air Conditioning, and Refrigeration Mechanics and Installers* in Imperial County²¹

Specialized Skills	Soft Skills	Software Skills

²⁰ Lightcast 2026.02; "Job Posting Analytics." 2023-2025.

²¹ Lightcast 2026.02; "Job Posting Analytics." 2023-2025.

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All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.