



# Greater Sacramento Building Electrification Workforce

Thursday, August 11, 2022

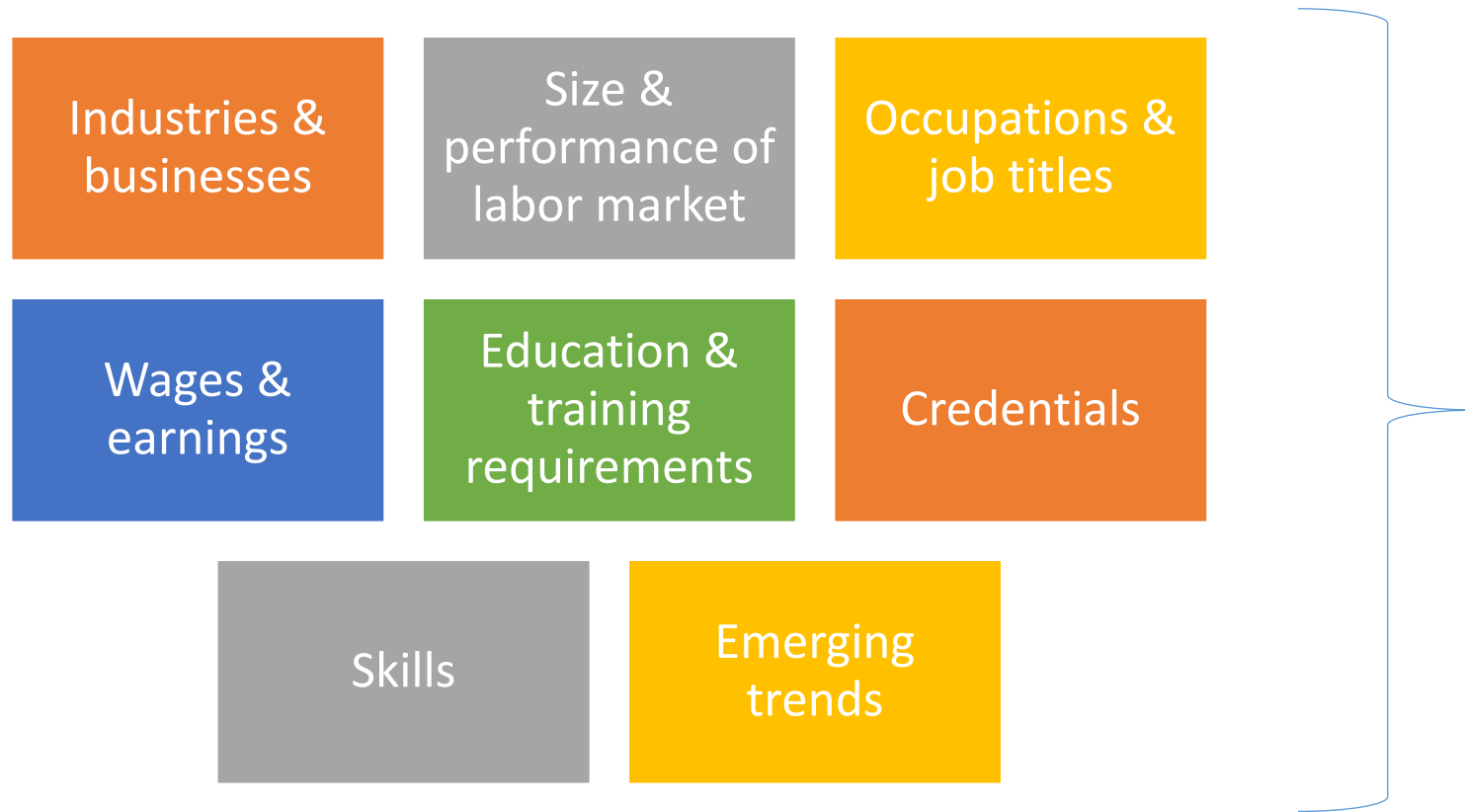


# Who is the Center of Excellence?



Region	Director
North/ Far North	Aaron Wilcher (North)
	Sara Phillips (Far North)
Bay Area	John Carrese
Central	Nora Seronello
South Central	Adele Hermann
Los Angeles	Luke Meyer
Orange County	Jesse Crete
Inland Empire/Desert	Michael Goss
San Diego/Imperial	Tina Ngo Bartel
Statewide	Laura Coleman

# Typical COE Research Questions



- What is the employment **outlook** for students?
- What **skills** and **credentials** are needed?
- What **programs** look ripe for investment?

# Definition Electrification Occupations

**Estimated Avg.  
Annual Job Change  
in California**

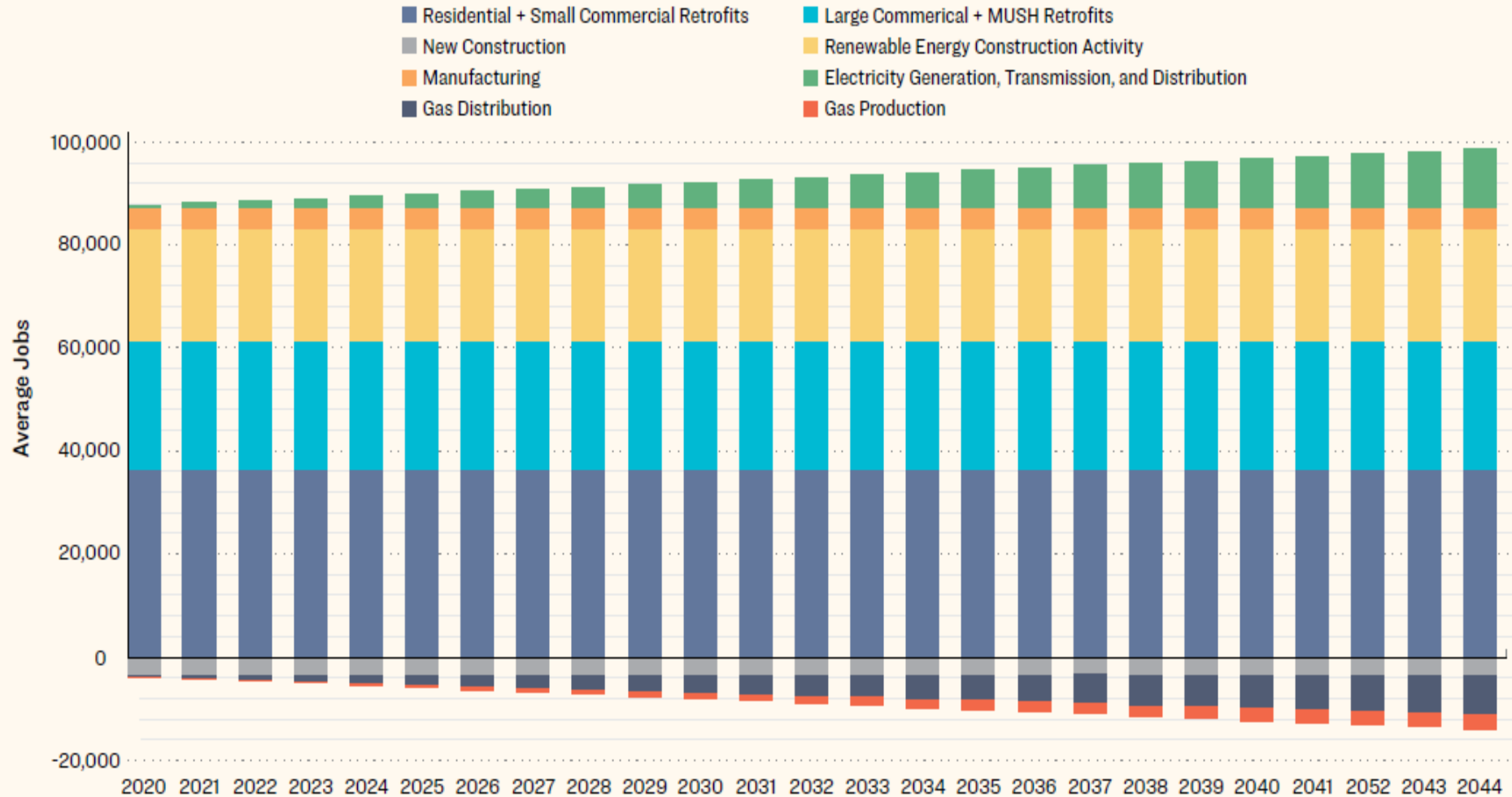
**Greatest Increases:**

- Building Retrofits (+42-81K jobs)
- Renewable Energy Construction (+20-23K jobs)

**Greatest Decreases:**

- Gas Production and Distribution (down 7-14K jobs)
- New construction (down 3.1-3.6K jobs; due to labor savings assoc. with new all electric construction)

ES Figure 3. Average Annual FTE Jobs Due To Building Electrification



Source: UCLA Luskin Center, "California Building Decarbonization Workforce Needs and Recommendations," Nov. 2019

# Electrification Workforce in Greater Sacramento

Existing Building Retrofits	New Building Construction	Greening and Weatherization	Gas and Electric Infrastructure and Utilities
<ul style="list-style-type: none"><li>• Electricians</li><li>• Plumbers &amp; Pipefitters</li><li>• HVAC/R Installers and Mechanics</li></ul>	<ul style="list-style-type: none"><li>• Carpenters</li><li>• Construction Laborers</li><li>• Construction and Building Inspectors</li><li>• Construction Management</li><li>• Supervisors of Construction Workers</li></ul>	<ul style="list-style-type: none"><li>• Solar PV Installers</li><li>• Glaziers (Glass)</li><li>• Architects &amp; Engineers</li><li>• Other management and implementation jobs</li></ul>	<ul style="list-style-type: none"><li>• Power-Line Installers and Repairers</li><li>• Gas and Power Plant Operators</li><li>• Electrical Repairers, Powerhouse, Substation, and Relay</li></ul>

Today's Focus

# Traditional Labor Market Information

- Source: Lightcast (formerly EMSI Burning Glass)
- Projections 2020 - 2025
- 7-county North (Greater Sacramento) subregion

# Greater Sacramento's Building Electrification Retrofit and Construction Workforce

51,876

Jobs in 2020

57,742

Jobs in 2025

11%

2020 – 2025 Projected  
Change

(9% Avg. Change in Sac)

5,866

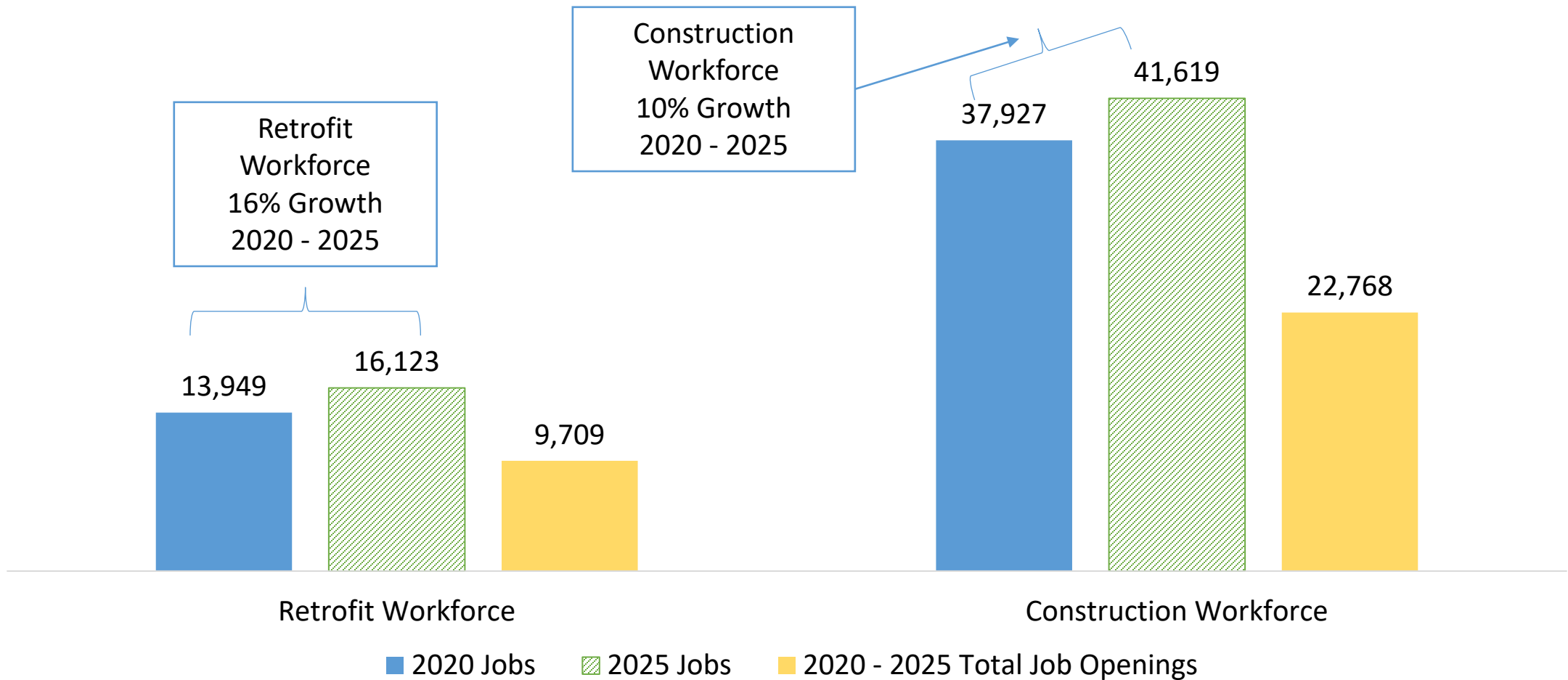
New Jobs by 2025

6,495

2020 – 2025 Annual Job  
Openings



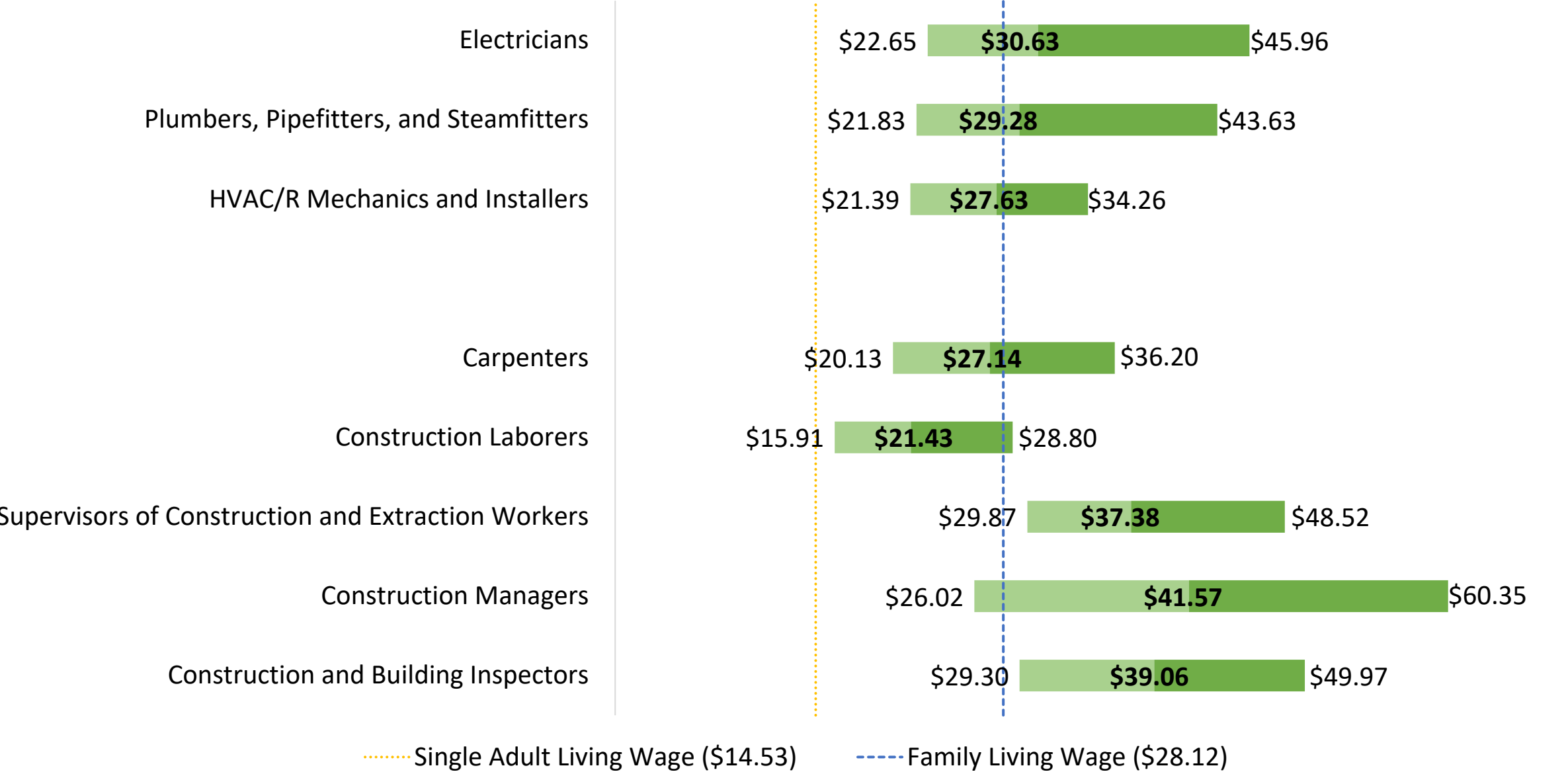
# Greater Sacramento's Building Electrification Workforce Projected Job Growth and Demand



Occupation	2020 Jobs	2025 Jobs	2020 - 2025 Projected Change	2020 - 2025 Projected % Change	2020 – 2025 Annual Job Openings
Electricians	6,589	8,087	1,498	23%	1,039
Plumbers, Pipefitters, and Steamfitters	3,999	4,351	353	9%	501
HVAC/R Mechanics and Installers	3,361	3,684	323	10%	402
<b>Retrofit Workforce</b>	<b>13,949</b>	<b>16,123</b>	<b>2,174</b>	<b>16%</b>	<b>1,942</b>
Carpenters	14,674	14,792	118	1%	1,501
Construction Laborers	12,011	13,262	1,251	10%	1,482
First-Line Supervisors of Construction Trades and Extraction Workers	5,757	7,161	1,404	24%	915
Construction Managers	4,561	5,348	787	17%	511
Construction and Building Inspectors	923	1,057	133	14%	145
<b>Construction Workforce</b>	<b>37,927</b>	<b>41,619</b>	<b>3,693</b>	<b>10%</b>	<b>4,554</b>
<b>Greater Sacramento Electrification Workforce</b>	<b>51,876</b>	<b>57,742</b>	<b>5,866</b>	<b>11%</b>	<b>6,495</b>

Source: Lightcast (frmly. EMSI Burning Glass), 2022.3; QCEW Employees, Non-QCEW Employees, and Self-Employed. The Greater Sacramento subregion includes El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo, and Yuba counties.

# Hourly Earnings vs. Living Wages in Greater Sacramento



Source: Lightcast (frmly. EMSI Burning Glass), 2022.3; QCEW Employees, Non-QCEW Employees, and Self-Employed. The Greater Sacramento subregion includes El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo, and Yuba counties.

# Job Postings

- Source: Lightcast (formerly EMSI Burning Glass)
- Projections 2020 - 2025
- 7-county North (Greater Sacramento) subregion

# 417,636

Job Postings in Greater  
Sacramento Region  
July 2021 – June 2022

# 7,088

Job Postings  
Jul 2021 – Jun 2022

# 1,890

Retrofit  
Job Posts

# 5,198

Construction  
Job Posts

Occupation	No. of Job Postings	Share of Job Postings
HVAC/R Mechanics and Installers	955	51%
Electricians	536	28%
Plumbers, Pipefitters, and Steamfitters	399	21%
<b>Retrofit Job Postings</b>	<b>1,890</b>	<b>100%</b>
Construction Managers	2,170	42%
Construction Laborers	1,536	30%
1 <sup>st</sup> Line Supervisors of Construction and Extraction Workers	569	11%
Carpenters	487	9%
Construction and Building Inspectors	436	8%
<b>Construction Job Postings</b>	<b>5,198</b>	<b>100%</b>
<b>Greater Sacramento Totals</b>	<b>7,088</b>	<b>100%</b>

# Retrofit Employers with the Most Job Postings

Employer	# Job Postings	% Job Postings	Type of Employer
GPAC	52	3%	Staffing
Blue Mountain Air, Inc.	52	3%	HVAC & General Construction Contractor
Johnson Controls	26	1%	Bldg. Automation
ARS - Beutler Air Conditioning & Plumbing	26	1%	HVAC (residential)
Tradesmen International	25	1%	Staffing
Sears	24	1%	Retail Home Services (Refrigeration & appliance repair)
Pacific Gas & Electric	20	1%	Utility
Mark III Construction	19	1%	MEP & Utilities Construction (commercial)
Huft Heating and Air Conditioning	17	1%	HVAC & Plumbing installation and service (residential)
ARS – Rescue Rooter	16	1%	Plumbing (residential)

Source: Lightcast (frmly. EMSI Burning Glass), 2022.3; QCEW Employees, Non-QCEW Employees, and Self-Employed. The Greater Sacramento subregion includes El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo, and Yuba counties.

# Construction Employers with the Most Job Postings

Employer	# Job Postings	% Job Postings	Type of Employer
Meritage Homes	123	2%	Single Family Home Construction
GPAC	95	2%	Staffing Company
MasTec	46	1%	Infrastructure Construction
KDC Construction	45	1%	Commercial Construction
Clark Pacific	38	1%	Prefab building systems (Construction + Manufacturing)
People Ready	37	1%	Staffing Company
MDC Holdings (Richard American Homes)	33	1%	Single Family Home Construction
CDM Smith	33	1%	Engineering & Construction Firm
Vanir Construction Management	31	1%	Construction Management Firm
TRC Companies	30	1%	Engineering & Construction Management Firm

Source: Lightcast (frmly. EMSI Burning Glass), 2022.3; QCEW Employees, Non-QCEW Employees, and Self-Employed. The Greater Sacramento subregion includes El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo, and Yuba counties.

# Educational Program Supply

- Source: CCCCCO DataMart, IPEDS, and EMSI Burning Glass
- 7-county North (Greater Sacramento) subregion



# Community College Training Programs

## American River

- Carpentry apprenticeships
- Electrical apprenticeships (incls. HVAC)
- Plumbing and Pipefitting apprenticeships

## Cosumnes River

- Building Inspection Technology (C/D)
- Construction Management Technology (C/D)
- Construction (C/D)
- Construction Pre-Apprenticeship (C)

## Sacramento City

- Mechanical Systems Technology (HVAC)(C)
- Mechanical-Electrical Technology (C/D)

## Sierra

- Construction Management (T)
- Construction Fundamentals (NC)

Source: The Chancellor's Office Curriculum Inventory System (COCI). <https://coci2.ccctechcenter.org/>. Accessed Aug. 8, 2022.

Notes: C = Certificate, D = Degree, T= Transfer-oriented degree, NC = Noncredit

# Other Postsecondary Training Programs

- Electrical and Electrician training programs
  - National Career Education (NCE), Citrus Heights
  - Independent Training & Apprenticeship (iTAP), La Riviera/Rancho Cordova
  - InterCoast College, Rancho Cordova
- Heating, AC, Ventilation and Refrigeration training Programs
  - Nation Career Education (NCE), Citrus Heights
  - UEI College, Sacramento
  - InterCoast College, Rancho Cordova

## North State Building Industry Association Training List

### Construction Related Post-Secondary Programs

Find this with live links at <https://www.biaworkforce.com/careers.html>

#### Career Technical Education At Regional Community Colleges

What is Career Technical Education?

Career Technical Education (CTE) is a term for educational programs that specialize in the skilled trades, applied arts and sciences, modern technologies, and career preparation. A key element of these programs is how coursework integrates academic knowledge with technical and career readiness skills, preparing students with the skills they need to launch into a career.

CTE Programs help students apply the abstract concepts and theories from academic coursework to real world situations, providing them with practical, and relevant skills that will make them more employable upon graduation. CTE programs often provide students with opportunities to gain work experience through internships, work-based learning, and industry-certification opportunities. CTE offers a wide range of learning experiences spanning many different career tracks, including skilled trades such as, automotive technology, construction, welding, and solar technology.

**Butte College**  
[Construction Laborer](#)  
[Cabinetmaker](#)  
[Electrician](#)  
[Construction Supervisor](#)  
[Heavy Equipment Operation](#)  
[Building Inspection Technology](#)  
[Civil Engineering Technology](#)  
[Drafting and CAD Technology](#)  
[Welding Technology](#)

**Folsom Lake College**  
[Waste/Wastewater Management](#)

For more information, visit:  
[BIAWorkforce.com](http://BIAWorkforce.com) or contact us at:  
[workforce@northstatebia.org](mailto:workforce@northstatebia.org)

**American River College**  
[Design/Engineering Technology](#)  
[Horticulture & Landscape Design](#)  
[Solar Energy Systems Design, Estimation, and Sales Certificate](#)  
[Welding Technology](#)

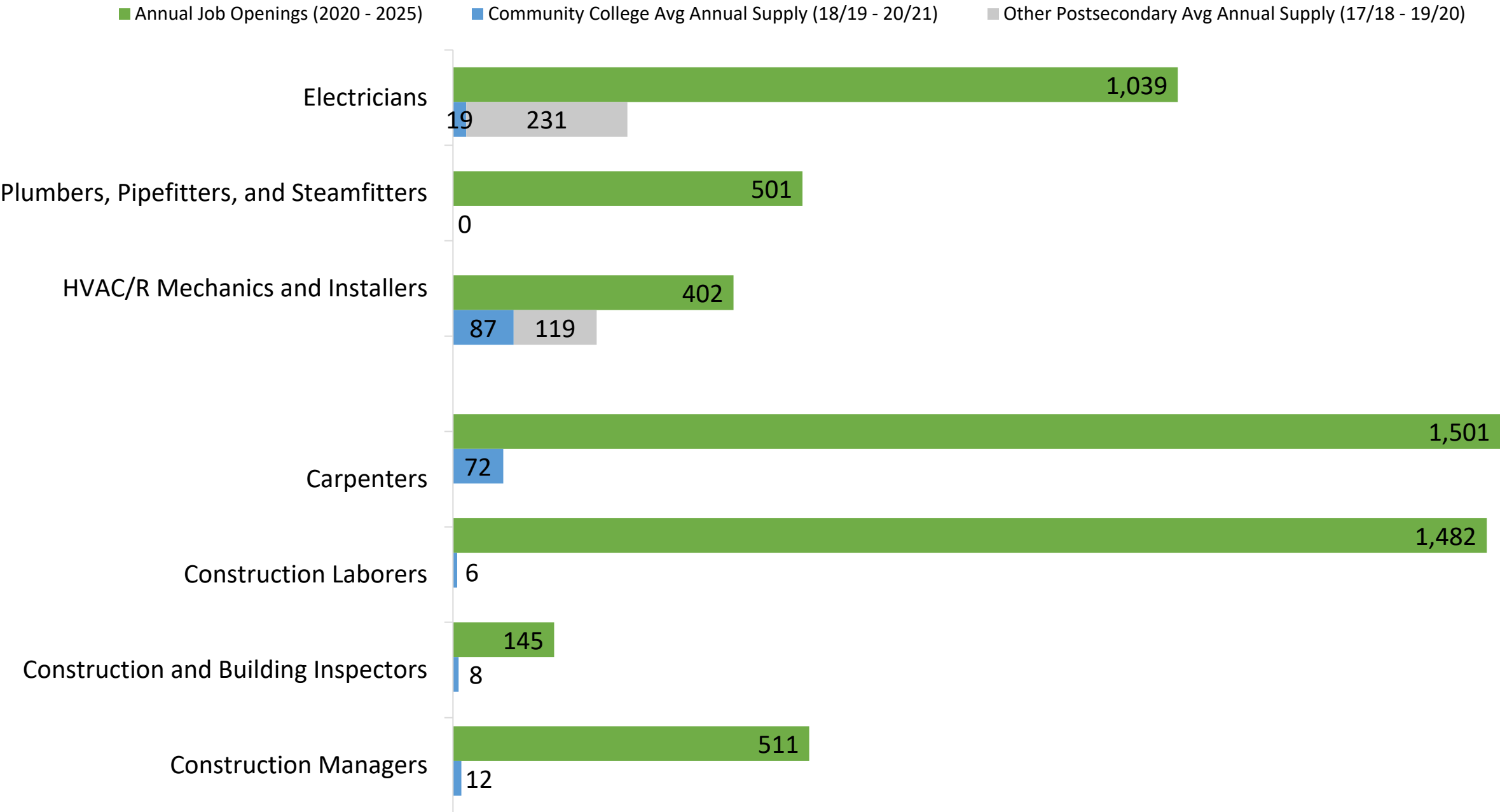
**Cosumnes River College**  
[Architectural Design Technology](#)  
[Architecture](#)  
[Architectural Technology Certificate](#)  
[Automotive Mechanics Technology](#)  
[Automotive Construction and Design](#)  
[Building Inspection Technology A.S. Degree](#)  
[Building Inspection Technology Certificate](#)  
[Construction A.S. Degree](#)  
[Construction Certificate](#)  
[Construction Pre-apprenticeship Certificate](#)  
[Construction Management A.S. Degree](#)  
[Construction Management Certificate](#)  
[Green Buildings Certificate](#)  
[Horticulture](#)  
[Horticulture: Sustainable Irrigation and Water Management Certificate](#)  
[Horticulture: Sustainable Landscape A.S. Degree](#)  
[Horticulture: Sustainable Landscape Design Certificate](#)  
[Interior Building Architecture A.S. Degree](#)  
[Interior Building Architecture Certificate](#)  
[Solar Installer Certificate](#)  
[Technology](#)  
[Engineering](#)  
[Welding Technology A.S. Degree](#)  
[Welding Technology Certificate](#)

**Sacramento City College**  
[Energy Auditing](#)  
[Engineering Design Technology](#)  
[Civil Engineering Commercial Building & Energy Auditing Specialist](#)  
[Engineering Design Technology](#)  
[HVAC Systems Design](#)  
[Mechanical/Electrical Technology](#)  
[Mechanical Systems Technology](#)



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# Job Demand v. Educational Supply



# Thank You!

- High level of demand for workers in retrofit and construction occupations in Greater Sacramento area
- Gap between demand and educational supply is opportunity to strengthen pipeline for skilled workers in these occupations

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