



Labor Market Analysis for Program Recommendation

Electric Vehicle Technician Occupations

College of Marin

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research

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Recommendation

Based on all available data, there appears to be an “undersupply” of Electric Vehicle Technician workers compared to the demand for this cluster of occupations in the Bay region and in the North Bay sub-region (Marin, Napa, Solano, Sonoma counties). There is a projected annual gap of about 4,034 students in the Bay region and 337 students in the North Bay Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 0948.00 - Automotive Technology programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at College of Marin and in the region.

This report profiles Electric Vehicle Technician Occupations in the 12 county Bay region and in the North Bay sub-region for a proposed new program at College of Marin.

- **Electric Motor, Power Tool, and Related Repairers (49-2092):** Repair, maintain, or install electric motors, wiring, or switches.
Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Moderate-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 38%
- **Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096):** Install, diagnose, or repair communications, sound, security, or navigation equipment in motor vehicles.
Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Moderate-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 52%
- **Automotive Service Technicians and Mechanics (49-3023):** Diagnose, adjust, repair, or overhaul automotive vehicles. Excludes “Automotive Body and Related Repairers” (49-3021), “Bus and Truck Mechanics and Diesel Engine Specialists” (49-3031), and “Electronic Equipment Installers and Repairers, Motor Vehicles” (49-2096).
Entry-Level Educational Requirement: Postsecondary nondegree award
Training Requirement: Short-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 36%
- **Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers (51-2028):** Assemble or modify electrical or electronic equipment, such as computers, test equipment telemetering

systems, electric motors, and batteries.

Entry-Level Educational Requirement: High school diploma or equivalent

Training Requirement: Moderate-term on-the-job training

Percentage of Community College Award Holders or Some Postsecondary Coursework: 28%

Occupational Demand

Table 1. Employment Outlook for Electric Vehicle Technician Occupations in Bay Region

Occupation	2021 Jobs	2026 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Electric Motor, Power Tool, and Related Repairers	227	238	12	5%	109	22	\$22	\$27
Electronic Equipment Installers and Repairers, Motor Vehicles	321	246	-75	-23%	135	27	\$20	\$21
Automotive Service Technicians and Mechanics	14,399	14,853	454	3%	7,810	1,562	\$21	\$28
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	20,601	22,329	1,728	8%	14,026	2,805	\$17	\$21
Total	35,548	37,666	2,118	6%	22,079	4,416		

Source: Lightcast 2022.3

Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Table 2. Employment Outlook for Electric Vehicle Technician Occupations in North Bay Sub-region

Occupation	2021 Jobs	2026 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Electric Motor, Power Tool, and Related Repairers	42	44	2	5%	20	4	\$21	\$25
Electronic Equipment Installers and Repairers, Motor Vehicles	15	14	-1	-6%	0	0	\$18	\$20
Automotive Service Technicians and Mechanics	2,768	2,938	169	6%	1,574	315	\$20	\$27
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	863	958	95	11%	613	123	\$16	\$20
Total	3,689	3,954	265	7%	2,207	442		

Source: Lightcast 2022.3

North Bay Sub-Region includes: Marin, Napa, Solano, Sonoma Counties

Job Postings in Bay Region and North Bay Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (Nov. 2022 - Oct. 2023)

Occupation	Bay Region	North Bay
Automotive Service Technicians and Mechanics	6,636	1,149
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	480	45
Electric Motor, Power Tool, and Related Repairers	55	5

Occupation	Bay Region	North Bay
Electronic Equipment Installers and Repairers, Motor Vehicles	24	5

Source: Lightcast

**Table 4a. Top Job Titles for Electric Vehicle Technician Occupations for latest 12 months (Nov. 2022 - Oct. 2023)
Bay Region**

Title	Bay	Title	Bay
Automotive Technicians	897	Vehicle Technicians	112
Service Technicians	249	Helicopter Mechanics	108
Lube Technicians	196	Mechanics	106
Mechanical Assemblers	182	General Service Technicians	93
Automotive Mechanics	181	Electromechanical Assemblers	87
Automotive Technicians/Mechanics	162	Electronic Assemblers	80
Automotive Service Advisors	157	Automotive Service Advisors/Writers	75
Automotive Tire and Lube Technicians	122	Shop Technicians	72
Technicians	117	Vehicle Operators	71

Source: Lightcast

**Table 4b. Top Job Titles for Electric Vehicle Technician Occupations for latest 12 months (Nov. 2022 - Oct. 2023)
North Bay Sub-Region**

Title	North Bay	Title	North Bay
Automotive Technicians	149	Automotive Mechanics	22
Lube Technicians	67	Transit Managers	22
Helicopter Mechanics	66	Mechanical Assemblers	19
Service Technicians	59	Detailers	18
Automotive Service Advisors	37	Automotive Service Advisors/Writers	17
Flat Rate Technicians	28	Automotive Technicians/Mechanics	13
General Service Technicians	25	Automotive Service Technicians	12
Mechanics	25	BMW Technicians	12
Technicians	23	Diesel Mechanic Journeymen	12

Source: Lightcast

Industry Concentration

Table 5. Industries hiring Electric Vehicle Technician Workers in Bay Region

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2021)	Jobs in Industry (2026)	% Change (2021-26)	% Occupation Group in Industry (2022)
General Automotive Repair	5,451	5,545	2%	14%
Semiconductor and Related Device Manufacturing	4,461	4,897	10%	13%
New Car Dealers	4,237	4,510	6%	11%
Electronic Computer Manufacturing	4,136	4,378	6%	11%
Analytical Laboratory Instrument Manufacturing	739	1,303	76%	3%
Other Electronic Component Manufacturing	826	873	6%	2%
Printed Circuit Assembly (Electronic Assembly) Manufacturing	897	1,014	13%	2%
Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	960	781	-19%	2%
All Other Miscellaneous Electrical Equipment and Component Manufacturing	636	980	54%	2%
Automotive Body, Paint, and Interior Repair and Maintenance	751	683	-9%	2%

Source: Lightcast 2022.3

Table 6. Top Employers Posting Electric Vehicle Technician Occupations in Bay Region and North Bay Sub-Region (Nov. 2022 - Oct. 2023)

Employer	Bay	Employer	North Bay
Bridgestone Corporation	231	Reach Air Medical Services	54
CarMax	152	Transdev	34
Toyota Motors	108	AAA	31
Transdev	98	Bridgestone Corporation	30
Tesla	97	Ford	29
AutoNation	90	Wise Auto Group	28

Source: Lightcast

Educational Supply

There are 14 community colleges in the Bay Region issuing 382 awards on average annually (last 3 years ending 2021-22) on TOP 0948.00 - Automotive Technology. In the North Bay Sub-Region, there are three (3) community colleges that issued 105 awards on average annually (last 3 years) on this TOP code.

Table 7. Community College Awards on TOP 0948.00 - Automotive Technology in Bay Region

College	Subregion	Associate Degree	High unit Certificate	Low unit Certificate	Noncredit award	Total
Alameda	East Bay	7	11	0	0	18
Chabot	East Bay	13	3	27	0	43
Contra Costa	East Bay	1	3	5	0	9
De Anza	Silicon Valley	18	11	51	3	83
Evergreen Valley	Silicon Valley	7	13	15	0	35
Hartnell	SC-Monterey	13	0	0	0	13
Las Positas	East Bay	5	0	7	0	12
Los Medanos	East Bay	7	0	13	0	20
Marin	North Bay	1	4	4	0	9
Monterey	SC-Monterey	4	5	3	0	12
San Francisco	Mid-Peninsula	7	0	17	0	24
Santa Rosa	North Bay	2	1	71	0	74
Skyline	Mid-Peninsula	7	0	1	0	8
Solano	North Bay	2	0	20	0	22
Total		94	51	234	3	382

Source: Data Mart

Note: The annual average for awards is 2019-20 to 2021 -22.

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 4,416 annual openings for the Electric Vehicle Technician occupational cluster and 382 annual (3-year average) awards for an annual undersupply of 4,034 students. In the North Bay Sub-Region, there is also a gap with 442 annual openings and 105 annual (3-year average) awards for an annual undersupply of 337 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0948.00 - Automotive Technology

Metric Outcomes	Bay All CTE Programs	College of Marin All CTE Programs	State 0948.00	Bay 0948.00	North Bay 0948.00	College of Marin 0948.00
Students with a Job Closely Related to Their Field of Study	74%	71%	71%	69%	81%	80%
Median Annual Earnings for SWP Exiting Students	\$53,090	\$45,210	\$33,007	\$43,465	\$38,044	\$44,314
Median Change in Earnings for SWP Exiting Students	24%	23%	44%	37%	50%	21%
Exiting Students Who Attained the Living Wage	54%	29%	42%	41%	45%	29%

Source: Launchboard Strong Workforce Program Median of 2018 to 2021.

Skills, Certifications and Education

Table 9. Top Skills for Electric Vehicle Technician Occupations in Bay Region (Nov. 2022 - Oct. 2023)

Skill	Posting	Skill	Posting
Automotive Services	1,660	Tires	524
Brakes	1,268	Electrical Systems	495
Suspension (Vehicle)	1,182	Tire Repairs	432
Hand Tools	819	Oil And Gas	425
Transmission	769	Batteries	374
Changing Oil	752	Engine Repair	351
HVAC	698	Power Tool Operation	349
Mechanics	632	Machinery	325
Vehicle Maintenance	556	Tire Balancing And Rotation	306
Vehicle Inspection	538	Diagnostic Tools	287

Source: Lightcast

Table 10. Certifications for Electric Vehicle Technician Occupations in Bay Region (Nov. 2022 - Oct. 2023)

Certification	Posting	Certification	Posting
Valid Driver's License	3,223	HVAC Certification	34
Automotive Service Excellence (ASE) Certification	1,184	Security Clearance	29
Commercial Driver's License (CDL)	226	Forklift Certification	27
Airframe & Powerplant (A&P) Certificate	132	First Aid Certification	20
Passenger Endorsement	92	ASE Advanced Engine Performance Certification	18
CDL Class A License	54	Aerial Lift Certification	12
CDL Class C License	47	Tanker & Hazmat Combo X Endorsement	12
CDL Class B License	42		

Source: Lightcast

Table 11. Education Requirements for Electric Vehicle Technician Occupations in Bay Region

Education Level	Job Postings	% of Total
High school or GED	2,623	70%
Associate degree	298	8%
Bachelor's degree & higher	851	22%

Source: Lightcast

Note: 54% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

Methodology

Occupations for this report were identified by use of job descriptions and skills listed in O*Net. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCO Data Mart and CTE Launchboard.

Sources

O*Net Online

Lightcast

CTE LaunchBoard www.calpassplus.org

Launchboard

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor's Office MIS system

Contacts

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