

# EV and Fuel Safety Occupations

# Labor Market Information Report

# De Anza College

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

**October 2021**

## Recommendation

Based on all available data, there appears to be an “undersupply” of EV and Fuel Safety workers compared to the demand for this cluster of occupations in the Bay region and in the Silicon Valley sub-region (Santa Clara county). There is a projected annual gap of about 1,751 students in the Bay region and 364 students in the Silicon Valley Sub-Region.

## Introduction

This report provides student outcomes data on employment and earnings for TOP 0948.40 - Alternative Fuels and Advanced Transportation 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 De Anza College and in the region.

This report profiles EV and Fuel Safety Occupations in the 12 county Bay region and in the Silicon Valley sub-region for a noncredit vocational program at De Anza College.

* **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%

## Occupational Demand

**Table 1. Employment Outlook for EV and Fuel Safety Occupations in Bay Region**

| **Occupation** | **2020 Jobs** | **2025 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Automotive Service Technicians and Mechanics | 17,187 | 16,409 | -777 | -5% | 8,779 | 1,756 | $20 | $51 |
| **Total** | **17,187** | **16,409** | **-778** | **-5%** | **8,779** | **1,756** | **$20** | **$51** |
| Source: EMSI 2021.3 |

**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 EV and Fuel Safety Occupations in Silicon Valley Sub-region**

| **Occupation** | **2020 Jobs** | **2025 Jobs** | **5-yr Change** | **5-yr % Change** | **5-yr Total Openings** | **Annual Openings** | **25% Hourly Earning** | **Median Hourly Wage** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Automotive Service Technicians and Mechanics | 3,698 | 3,321 | -377 | -10% | 1,818 | 364 | $20 | $55 |
| **Total** | **3,698** | **3,321** | **-377** | **-10%** | **1,818** | **364** | **$20** | **$55** |
| Source: EMSI 2021.3 |

**Silicon Valley Sub-Region includes:** Santa Clara County

### Job Postings in Bay Region and Silicon Valley Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Sep 2020 - Aug 2021)**

| **Occupation** | **Bay Region** | **Silicon Valley** |
| --- | --- | --- |
| Automotive Specialty Technicians | 7,042 | 1,613 |
| Automotive Master Mechanics | 381 | 122 |
| Source: Burning Glass |

**Table 4a. Top Job Titles for EV and Fuel Safety Occupations for latest 12 months (Sep 2020 - Aug 2021) Bay Region**

| **Title** | **Bay** | **Title** | **Bay** |
| --- | --- | --- | --- |
| Automotive Technician | 584 | Automotive Technician/Mechanic | 73 |
| Service Technician | 160 | Auto Mechanic | 67 |
| Lube Technician | 152 | Technician | 59 |
| Automotive Service Advisor | 129 | Auto Technician | 53 |
| Automotive Lube Technician | 108 | Automated Vehicle Operator Driver | 51 |
| Automotive Mechanic | 107 | Self - Driving Vehicle Operator | 50 |
| Mechanic | 82 | Automotive Service Advisor/Writer | 49 |
| General Service Technician | 74 | Quick Lube Technician | 46 |
| Source: Burning Glass |

**Table 4b. Top Job Titles for EV and Fuel Safety Occupations for latest 12 months (Sep 2020 - Aug 2021) Silicon Valley Sub-Region**

| **Title** | **Silicon Valley** | **Title** | **Silicon Valley** |
| --- | --- | --- | --- |
| Automotive Technician | 120 | Mechanic | 15 |
| Service Technician | 45 | General Service | 14 |
| Lube Technician | 39 | Auto Mechanic | 13 |
| Automotive Lube Technician | 35 | Smog Technician | 13 |
| Automotive Service Advisor | 28 | Autonomous Vehicle Operator | 11 |
| Technician | 25 | Fence Technician | 11 |
| Automotive Mechanic | 19 | Flat Rate Technician | 11 |
| General Service Technician | 19 | Master Technician | 11 |
| Automotive Technician/Mechanic | 15 | Automotive Senior Technician | 10 |
| Source: Burning Glass |

## Industry Concentration

**Table 5. Industries hiring EV and Fuel Safety Workers in Bay Region**

| **Industry – 6 Digit NAICS (No. American Industry Classification) Codes** | **Jobs in Industry (2020)** | **Jobs in Industry (2025)** | **% Change (2020-25)** | **% Occupation Group in Industry (2020)** |
| --- | --- | --- | --- | --- |
| General Automotive Repair | 5,943 | 5,717 | -4% | 35% |
| New Car Dealers | 4,393 | 3,891 | -11% | 26% |
| Automotive Body, Paint, and Interior Repair and Maintenance | 819 | 723 | -12% | 5% |
| Automotive Parts and Accessories Stores | 531 | 473 | -11% | 3% |
| Taxi Service | 278 | 421 | 51% | 2% |
| Local Government, Excluding Education and Hospitals | 441 | 420 | -5% | 3% |
| Car Washes | 411 | 370 | -10% | 2% |
| Used Car Dealers | 311 | 341 | 10% | 2% |
| Tire Dealers | 336 | 339 | 1% | 2% |
| All Other Automotive Repair and Maintenance | 309 | 319 | 3% | 2% |
| Source: EMSI 2021.3 |

**Table 6. Top Employers Posting EV and Fuel Safety Occupations in Bay Region and Silicon Valley Sub-Region (Sep 2020 - Aug 2021)**

| **Employer** | **Bay** | **Employer** | **Silicon Valley** |
| --- | --- | --- | --- |
| Lucid Motors Inc | 295 | Lucid Motors Inc | 49 |
| United Parcel Service Inc. | 210 | Bridgestone / Firestone | 43 |
| Bridgestone / Firestone | 158 | Jiffy Lube | 35 |
| Carmax | 144 | Goodyear | 35 |
| Jiffy Lube | 126 | Toyota Motors | 29 |
| Transdev Inc | 107 | Stress Free Auto Care | 28 |
| Big O Tires | 106 | Pep Boys | 23 |
| Toyota Motors | 99 | Google Inc. | 23 |
| Chrysler | 96 | Big O Tires | 23 |
| United Site Services | 92 | United Site Services | 22 |
| Source: Burning Glass |

## Educational Supply

There is one (1) community college in the Bay Region issuing 5 awards on average annually (last 3 years ending 2018-19) on TOP 0948.40 - Alternative Fuels and Advanced Transportation Technology. In the Silicon Valley Sub-Region, there are no community colleges that issued awards on average annually (last 3 years) on this TOP code.

**Table 7a. Community College Awards on TOP 0948.40 - Alternative Fuels and Advanced Transportation Technology in Bay Region**

| **College** | **Subregion** | **Certificate Low** | **Total** |
| --- | --- | --- | --- |
| San Francisco | Mid-Peninsula | 5 | 5 |
| **Total** |  | **5** | **5** |
| Source: Data Mart |

*Note: The annual average for awards is 2016-17 to 2018-19.*

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 1,756 annual openings for the EV and Fuel Safety occupational cluster and 5 annual (3-year average) awards for an annual undersupply of 1,751 students. In the Silicon Valley Sub-Region, there is also a gap with 364 annual openings and no annual (3-year average) awards for an annual undersupply of 364 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0948.40 - Alternative Fuels and Advanced Transportation Technology**

| **Metric Outcomes** | **Bay** **All CTE Program** | **De Anza** **All CTE Program** | **State 0948.40** | **Bay 0948.40** | **Silicon Valley 0948.40** | **De Anza 0948.40** |
| --- | --- | --- | --- | --- | --- | --- |
| Students with a Job Closely Related to Their Field of Study | 73% | 73% | 77% | 80% | 71% | N/A |
| Median Annual Earnings for SWP Exiting Students | $44,575 | $41,081 | $31,755 | $37,352 | $36,256 | N/A |
| Median Change in Earnings for SWP Exiting Students | 30% | 31% | 31% | 35% | 42% | 52% |
| Exiting Students Who Attained the Living Wage | 53% | 50% | 52% | 43% | 41% | 33% |
| Source: Launchboard Strong Workforce Program Median of 2016-18. |

## Skills, Certifications and Education

**Table 9. Top Skills for EV and Fuel Safety Occupations in Bay Region (Sep 2020 - Aug 2021)**

| **Skill** | **Posting** | **Skill** | **Posting** |
| --- | --- | --- | --- |
| Repair | 4,204 | Predictive / Preventative Maintenance | 389 |
| Auto Repair | 2,367 | Electrical Systems | 388 |
| Customer Service | 1,431 | Tire Repairs | 383 |
| Automotive Services Industry Knowledge | 1,320 | Lifting Ability | 365 |
| Oil Changes | 781 | Sales | 357 |
| Cleaning | 583 | Engine Repair | 311 |
| Motor Vehicle Operation | 533 | Occupational Health and Safety | 287 |
| Hand Tools | 519 | Welding | 283 |
| Vehicle Maintenance | 508 | Power Tools | 246 |
| Scheduling | 487 | Manual Dexterity | 221 |
| Personal Protective Equipment (PPE) | 483 | Commercial Driving | 220 |
| Automotive Industry Knowledge | 444 | Forklift Operation | 216 |
| Customer Contact | 421 | Retail Industry Knowledge | 214 |
| Vehicle Inspection | 391 | Brake Work | 204 |
| Source: Burning Glass |

**Table 10. Certifications for EV and Fuel Safety Occupations in Bay Region (Sep 2020 - Aug 2021)**

| **Certification** | **Posting** | **Certification** | **Posting** |
| --- | --- | --- | --- |
| Driver's License | 3,946 | Mobile Electronics Certified Professional (MECP) | 37 |
| Automotive Service Excellence (ASE) Certification | 1,356 | MECP Basic Installation | 30 |
| Epa 609 | 106 | Chrysler Certified | 26 |
| Air Brake Certified | 64 | Cdl Class C | 25 |
| CDL Class A | 58 | Heavy Truck |  19 |
| Occupational Safety and Health Administration Certification | 48 | Environmental Protection Agency Certification | 18 |
| OSHA Forklift Certification | 45 | Quality Service | 15 |
| Cdl Class B | 39 | Brake Inspector Certification | 15 |
| Source: Burning Glass |

**Table 11. Education Requirements for EV and Fuel Safety Occupations in Bay Region**

| **Education (minimum advertised)** | **Latest 12 Mos. Postings** | **Percent 12 Mos. Postings** |
| --- | --- | --- |
| High school or vocational training | 2,838 | 97% |
| Associate degree | 94 | 3% |
| Source: Burning Glass |

*Note: 61% 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 skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

## Sources

O\*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)
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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