** Automotive Alternative Fuels/Hybrid Technology Occupations**

**Labor Market Information Report**

**Las Positas College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

November 2019

# Recommendation

Based on all available data, there appears to be an undersupply of Automotive Alternative Fuels/Hybrid Technology workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda and Contra Costa Counties). There is a projected annual gap of about 1,813 students in the Bay region and 644 students in the East Bay Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0948.40 - Alternative Fuels and Advanced Transportation Technology 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 Las Positas College and in the region.

# Introduction

This report profiles Automotive Alternative Fuels/Hybrid Technology Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Las Positas College.

|  |
| --- |
| * **Automotive Service Technicians and Mechanics (SOC 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: 33% |

# Occupational Demand

**Table 1. Employment Outlook for Automotive Alternative Fuels/Hybrid Technology Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2018 Jobs | 2023 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Automotive Service Technicians and Mechanics |  17,328  |  18,225  | 897 | 5% |  9,105  |  1,821  | $12.67 | $23.13 |

*Source: EMSI 2019.2*

**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 Automotive Alternative Fuels/Hybrid Technology Occupations in East Bay Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2018 Jobs | 2023 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Automotive Service Technicians and Mechanics |  5,784  |  6,239  | 455 | 8% |  3,218  |  644  | $12.76 | $23.32 |

*Source: EMSI 2019.2*

**East Bay Sub-Region** includes Alameda and Contra Costa Counties

### Job Postings in Bay Region and East Bay Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (November 2018 - October 2019)**

| Occupation | Bay Region | East Bay |
| --- | --- | --- |
|  Automotive Specialty Technicians | 4,604 | 1,473 |
|  Automotive Master Mechanics | 443 | 121 |
|  **Total** | **5,047** | **1,594** |

*Source: Burning Glass*

**Table 4a. Top Job Titles for Automotive Alternative Fuels/Hybrid Technology Occupations for latest 12 months (November 2018 - October 2019) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| Auto Technician | 809 | Automotive Service Technician | 41 |
| Service Technician | 309 | Flat Rate Technician | 38 |
| Mechanic | 292 | Technician, Retail Industry | 37 |
| Lube Technician | 267 | Repair Technician | 36 |
| Technician | 254 | Assessor | 32 |
| Detailer | 189 | Inspector | 31 |
| Auto Mechanic | 184 | Automotive Advisor | 31 |
| Automotive Service Advisor | 131 | 91B Light-Wheel Vehicle Mechanic | 30 |
| Automotive Technician | 75 | Trainer | 28 |
| Fueler | 62 | Oil Change Technician | 28 |
| Roadside Assistance Technician | 57 | Personal Service Coordinator, Behavioral Health | 24 |
| Shop Technician | 56 | Area Technician | 22 |
| Field Service Technician | 51 | Behavior Technician | 21 |
| Personal Package Driver | 46 | Specialist | 20 |

**Table 4b. Top Job Titles for Automotive Alternative Fuels/Hybrid Technology Occupations for latest 12 months (November 2018 - October 2019) East Bay Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | East Bay | Common Title | East Bay |
| Auto Technician | 253 | Roadside Assistance Technician | 19 |
| Service Technician | 99 | Automotive Service Technician | 19 |
| Mechanic | 94 | Inspector | 18 |
| Lube Technician | 93 | 91B Light-Wheel Vehicle Mechanic | 14 |
| Technician | 66 | Roadside Rescuer | 13 |
| Detailer | 59 | Assessor | 13 |
| Auto Mechanic | 37 | Area Technician | 13 |
| Automotive Service Advisor | 36 | Repair Technician | 12 |
| Shop Technician | 35 | Driving Operator | 10 |
| Automotive Technician | 25 | Brake And Alignment Technician | 9 |
| Field Service Technician | 24 | Automotive Advisor | 9 |
| Personal Service Coordinator, Behavioral Health | 21 | Technician/Leader, Geek Squad | 8 |
| Personal Package Driver | 20 | Installation Maintenance Sales, Service, Tire | 8 |
| Fueler | 20 | ASE Technician | 8 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries Hiring Automotive Alternative Fuels/Hybrid Technology Workers in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2018) | Jobs in Industry (2022) | % Change (2018-22) | % in Industry (2018) |
| General Automotive Repair (811111) | 6,063 | 6,289 | 4% | 35% |
| New Car Dealers (441110) | 4,728 | 4,886 | 3% | 27% |
| Automotive Body, Paint, and Interior Repair and Maintenance (811121) | 921 | 917 | 0% | 5% |
| Automotive Parts and Accessories Stores (441310) | 614 | 560 | -9% | 4% |
| Other Automotive Mechanical and Electrical Repair and Maintenance (811118) | 493 | 466 | -5% | 3% |
| Local Government, Excluding Education and Hospitals (903999) | 426 | 404 | -5% | 2% |
| Tire Dealers (441320) | 398 | 436 | 10% | 2% |
| Car Washes (811192) | 369 | 372 | 1% | 2% |
| All Other Automotive Repair and Maintenance (811198) | 341 | 378 | 11% | 2% |
| Used Car Dealers (441120) | 320 | 397 | 24% | 2% |
| Automotive Transmission Repair (811113) | 179 | 151 | -16% | 1% |
| Gasoline Stations with Convenience Stores (447110) | 170 | 163 | -4% | 1% |

*Source: EMSI 2019.2*

**Table 6. Top Employers Posting Automotive Alternative Fuels/Hybrid Technology Occupations in Bay Region and East Bay Sub-Region (November 2018 - October 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | East Bay |
| United Parcel Service Incorporated | 177 | Chevrolet | 41 | United Parcel Service Incorporated | 55 |
| Chrysler | 137 | Best Buy | 40 | Allstate Good Hands Rescue Network | 28 |
| Bridgestone / Firestone | 105 | Del Grande Dealer Group | 35 | Telecare Corporation | 27 |
| Jiffy Lube | 78 | Qvale Auto Group | 33 | Lucid Motors Inc | 27 |
| Allstate Good Hands Rescue Network | 76 | Lexus | 33 | Hendrick Automotive Group | 27 |
| Pep Boys | 68 | Telecare Corporation | 32 | Chrysler | 27 |
| Sonic Automotive | 62 | FedEx | 32 | Allstate | 27 |
| Honda | 62 | US Army | 31 | Jiffy Lube | 26 |
| Carmax | 62 | Army National Guard | 31 | Honda | 25 |
| Allstate | 58 | Yourmechanic | 29 | Pep Boys | 24 |
| Penske Automotive Group | 57 | Mopar Cap Student Program | 27 | Bridgestone / Firestone | 24 |
| Autonation | 57 | Lucid Motors Inc | 27 | Carmax | 23 |
| Lithia Motors Incorporated | 56 | Hertz Corporation | 27 | Sonic Automotive | 21 |
| Toyota Motors | 51 | Hendrick Automotive Group | 27 | Toyota Motors | 19 |
| Amerit Fleet Solutions | 49 | Big O Tires | 25 | Autonation | 19 |
| Tesla | 41 | Subaru | 24 | Lithia Motors Incorporated | 18 |
| Penske | 41 | United Site Services | 22 | FedEx | 17 |

*Source: Burning Glass*

# Educational Supply

There is one community college (CCSF) in the Bay Region issuing 8 awards on average annually (last 3 years) on TOP 0948.40 - Alternative Fuels and Advanced Transportation Technology. There are no colleges in the East Bay Region issuing awards on this TOP code.

**Table 7. Awards on TOP 0948.40 - Alternative Fuels and Advanced Transpiration Technology** **in Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificate 18+ units | Certificate Low unit | Total |
| **City College of San Francisco**  | Mid-Peninsula | 0 | 8 |  | 8 |
| **Total Bay Region** | **0** | **8** | **0** | **8** |
| **Total East Bay Sub-Region** | **0** | **0** | **0** | **0** |

# *Source: Data Mart*

Note: The annual average for awards is 2015-16 to 2017-18.

# Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 1,821 annual openings for the Automotive Alternative Fuels/Hybrid Technology occupational cluster and 8 annual (3-year average) awards for an annual undersupply of 1,813 students. In the East Bay Sub-Region, there is also a gap with 644 annual openings and no annual (3-year average) awards for an annual undersupply of 644 students.

# Student Outcomes

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay (All CTE Programs) | Las Positas College (All CTE Programs) | State (0948.40) | Bay (0948.40) | East Bay (0948.40) | Las Positas College (0948.40) |
| % Employed Four Quarters After Exit | 74% | 75% | 73% | 81% | 71% | 75% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,000 | $9,849 | $10,242 | $9,500 | $9,849 |
| Median % Change in Earnings | 46% | 28% | 46% | 47% | 50% | 46% |
| % of Students Earning a Living Wage | 63% | 64% | 59% | 59% | 57% | 59% |

*Source: Launchboard Pipeline (version available on 11/4/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Automotive Alternative Fuels/Hybrid Technology Occupations in Bay Region (November 2018 - October 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Repair | 2,773 | Mechanical Repair | 230 | Machinery | 127 |
| Auto Repair | 1,300 | Lifting Ability | 215 | Data Entry | 126 |
| Customer Service | 1,056 | Cleaning | 213 | Automotive Mechanical Diagnosis | 121 |
| Automotive Services Industry Knowledge | 808 | Power Tools | 184 | Highway Maintenance | 111 |
| Customer Contact | 458 | Retail Industry Knowledge | 184 | Store Management | 109 |
| Vehicle Maintenance | 389 | Roadside Assistance | 169 | Wiring | 108 |
| Hand Tools | 357 | Brake Work | 164 | Engine Repair | 105 |
| Vehicle Inspection | 345 | Welding | 164 | Technical Training | 105 |
| Oil Changes | 340 | Transmission Repair | 157 | Tire Repairs | 102 |
| Scheduling | 318 | Inspection Records | 155 | Purchasing | 95 |
| Automotive Industry Knowledge | 294 | Test Equipment | 148 | Inventory Management | 89 |
| Sales | 294 | Quality Assurance and Control | 141 | Merchandising | 88 |
| Electrical Systems | 292 | Battery Testing and Installation | 137 | Hydraulics | 84 |
| Motor Vehicle Operation | 257 | Manual Dexterity | 137 | Budgeting | 82 |
| Predictive / Preventative Maintenance | 238 | Occupational Health and Safety | 133 | Diagnosis of Drivability | 81 |

*Source: Burning Glass*

**Table 10. Certifications for Automotive Alternative Fuels/Hybrid Technology Occupations in Bay Region (November 2018 - October 2019)**

Note: 83% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| Driver's License | 2,668 | Certified Career Development Facilitator | 27 |
| Automotive Service Excellence (ASE) Certification | 685 | CDL Class B | 26 |
| First Aid CPR AED | 55 | Good Conduct | 22 |
| Air Brake Certified | 53 | CDL Class C | 22 |
| CDL Class A | 52 | Occupational Safety and Health Administration Certification | 20 |
| Chrysler Certified | 48 | Auto Repair Certification | 16 |
| Certified Lube Technician | 46 | Environmental Protection Agency Certification | 15 |
| Mobile Electronics Certified Professional (MECP) | 43 | Advanced Engine Performance Certified | 13 |
| Mobile Electronics Certified Professional | 43 | Microsoft Certified Systems Engineer (Legacy) | 12 |
| Registered Behavior Technician | 31 | Epa 609 | 10 |
| MECP Basic Installation | 30 | Security Clearance | 9 |
| MECP Advanced Certification | 27 | CompTIA Network+ | 8 |

*Source: Burning Glass*

**Table 11. Education Requirements for Automotive Alternative Fuels/Hybrid Technology Occupations in Bay Region**

Note: 65% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |  |
| --- | --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings | Percent 12 Mos. Postings |
| High school or vocational training | 1,694 | 96% |
| Associate Degree | 70 | 4% |
| Bachelor’s Degree or Higher | 0 | 0% |

*Source: Burning Glass*

# 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/](http://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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