

Program Endorsement Brief: 0948.40/Alternative Fuels and Advanced Transportation Technology

Clean Energy and Vehicle Electrification Certificate

Los Angeles/Orange County Center of Excellence, December 2018

Summary:

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide regional labor market supply and demand data related to clean energy and vehicle electrification. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with relevant occupations.

The following summarizes key findings from this data brief:

- Alternative fuels and advanced transportation occupations are increasing by 3% over the next five years, and more than 3,300 job openings will be available annually due to new job growth and replacement need.
- Over the past 12 months, there were 1,003 online job postings related to alternative fuels and advanced transportation technology in Los Angeles and Orange Counties.
- Three other related program recommendation requests were received between January and November 2018 from regional community colleges.
- Five colleges in the region have existing programs closely related to alternative fuels and advanced transportation technology.
- Between 2014 and 2017, community colleges in the region conferred an average of 38 awards annually (associate degrees and certificates) in related training programs.

Occupational Demand—In Los Angeles/Orange County, the number of jobs for alternative fuels and advanced transportation jobs is projected to increase by 3%. There will be more than 3,300 job openings per year through 2022 (Exhibit 1).

Exhibit 1: Occupational demand in Los Angeles and Orange Counties¹

Geography	2017 Jobs	2022 Jobs	2017-2022 Change	2017-2022 % Change	Annual Openings
Los Angeles	25,729	26,309	580	2%	2,489
Orange	8,115	8,551	436	5%	844
Total	33,844	34,861	1,017	3%	3,333

Wages—Entry-level wages for alternative fuels and advanced transportation occupations in the region are between \$10.89 and \$14.16. Entry-level wages for automotive service technicians and mechanics are lower than the MIT Living hourly wage for one adult in the region (\$13.54 in

¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Los Angeles County and \$15.31 in Orange County). Experienced workers earn between \$31.49 and \$37.86, which is higher than the living wage. Regional wages are below the average statewide wage for this occupation.

Job Postings—There were 1,003 online job postings related to alternative fuels and advanced transportation technology listed in the past 12 months. The majority of job postings are for auto technicians, diesel technicians, diesel mechanics, mechanics and service technicians. Top specialized skills are: automotive repair, electrical systems and welding. The top three employers, by number of job postings, in the region are: Bridgestone/Firestone, Chrysler and Amerit Fleet Solutions.

Educational Attainment—The BLS lists a high school diploma as the typical entry-level education for diesel engine specialists, and a postsecondary non-degree award for automotive service technicians. The national-level educational attainment data indicates between 33% and 35% of workers in the field have completed some college or an associate degree. In Los Angeles/Orange County, 97% of job postings request high school or vocational training.

Community College Supply—Appendix A shows the three-year average number of awards conferred by community colleges in the related TOP code: Alternative Fuels and Advanced Transportation Technology (0948.40). The colleges with the most completions in the region are: LA Trade-Tech, Long Beach and Rio Hondo. Between January and November 2018, there were three other related program recommendation requests from regional community colleges.

Appendix A: Regional community college awards (certificates and degrees), 2014-2017

TOP Code	Program	College	2014-15 Awards	2015-16 Awards	2016-2017 Awards	3-Year Award Average
0948.40	Alternative Fuels and Advanced Transportation Technology	Cerritos	-	-	1	0
		LA Trade-Tech	15	9	11	12
		Long Beach	12	21	-	11
		Rio Hondo	6	6	14	9
		Saddleback	9	5	4	6
Total/Average			42	41	30	38

Appendix B: Occupational demand and wage data by county

Exhibit 2. Los Angeles County

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Automotive Service Technicians and Mechanics (49-3023)	20,651	20,891	240	1%	1,961	\$10.90	\$16.61	\$28.90
Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)	5,078	5,418	340	7%	528	\$14.22	\$26.80	\$37.76
Total	25,729	26,309	580	2%	2,489			

Exhibit 3. Orange County

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Automotive Service Technicians and Mechanics (49-3023)	6,871	7,194	323	5%	707	\$10.96	\$16.63	\$38.19
Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)	1,244	1,358	114	9%	136	\$13.96	\$21.96	\$36.53
Total	8,115	8,551	436	5%	844			

Exhibit 4. Los Angeles and Orange Counties

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings	Median Hourly Earnings	Experienced Hourly Earnings
Automotive Service Technicians and Mechanics (49-3023)	27,522	28,085	563	2%	2,668	\$10.89	\$16.59	\$31.49
Bus and Truck Mechanics and Diesel Engine Specialists (49-3031)	6,322	6,776	454	7%	665	\$14.16	\$25.82	\$37.86
Total	33,844	34,861	1,017	3%	3,333			

Appendix C: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (EMSI)
- Employment Development Department, Labor Market Information Division, OES
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- MIT Living Wage
- Chancellor's Office Curriculum Inventory (COCI 2.0)

For more information, please contact:

Lori Sanchez, Director
Center of Excellence, Los Angeles/Orange County Region
Lsanchez144@mtsac.edu

December 2018

