










Welders, Cutters, Solderers, and Brazers

Labor Market Analysis: Imperial County

May 2021

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL OF EDUCATION
 <p>Do Not Proceed with New Program</p>	 	 	<input type="checkbox"/> Bachelor's Degree <input type="checkbox"/> Associate Degree <input type="checkbox"/> Some College or Certificate
<p>SUPPORT FOR PROGRAM MODIFICATION?</p>  	<p>NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING</p> <p>HIGH</p> 	<p>NUMBER OF ANNUAL JOB OPENINGS</p> <p>MEDIUM</p> 	<input checked="" type="checkbox"/> HS Diploma or Equivalent <input type="checkbox"/> Less than a HS Diploma <input type="checkbox"/> Apprenticeship

The San Diego-Imperial Center of Excellence for Labor Market Research (COE) developed this brief to assist the region's community colleges with strategic planning and program development. According to available labor market information, *Welders, Cutters, Solderers, and Brazers* in Imperial County have a labor market demand of 11 annual job openings (while average demand for a single occupation in Imperial County is 14 annual job openings), and two educational institutions in Imperial County supply 93 awards for this occupation, suggesting that there is an oversupply in the labor market. Entry-level wages and median wages for this occupation are above the living wage. This brief recommends that the colleges do not proceed with developing a **new** program for this occupation but supports a program modification because 1) entry-level and median wages are above the living wage and 2) Imperial Valley College is the only community college with a Welding Technology (TOP 0956.50) program.

Introduction

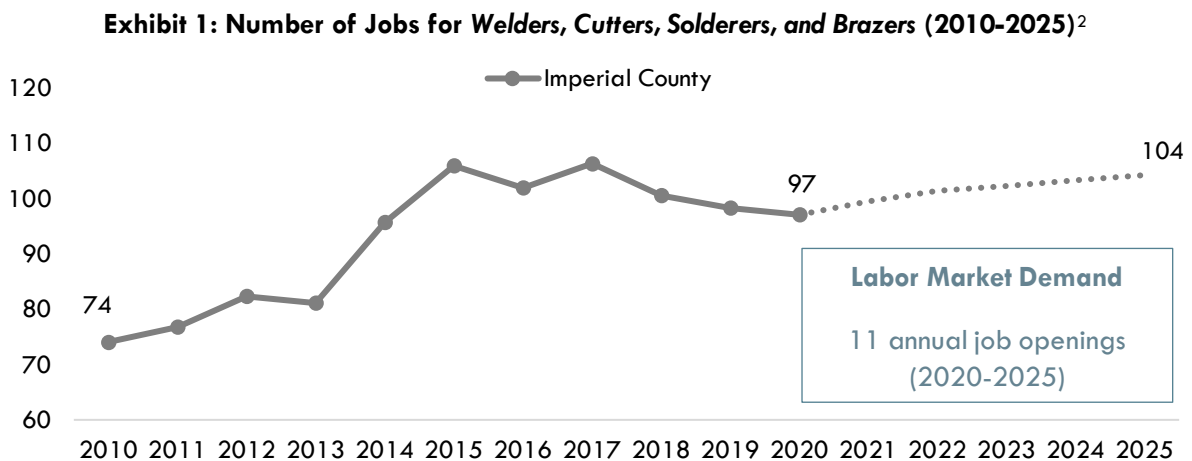
This report provides labor market information in Imperial County for the following occupational code in the Standard Occupational Classification (SOC)¹ system:

Welders, Cutters, Solderers, and Brazers (SOC 51-4121): Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products. Sample reported job titles include:

- Aluminum Welder
- Production Welder
- Maintenance Welder
- Welder Fabricator
- Wirer
- Refrigeration Specialist
- Refrigeration Brazier/Solderer

Projected Occupational Demand

Between 2020 and 2025, *Welders, Cutters, Solderers, and Brazers* are projected to increase by **seven net jobs** or **seven percent** (Exhibit 1). Employers in Imperial County will need to hire **11 workers** annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.



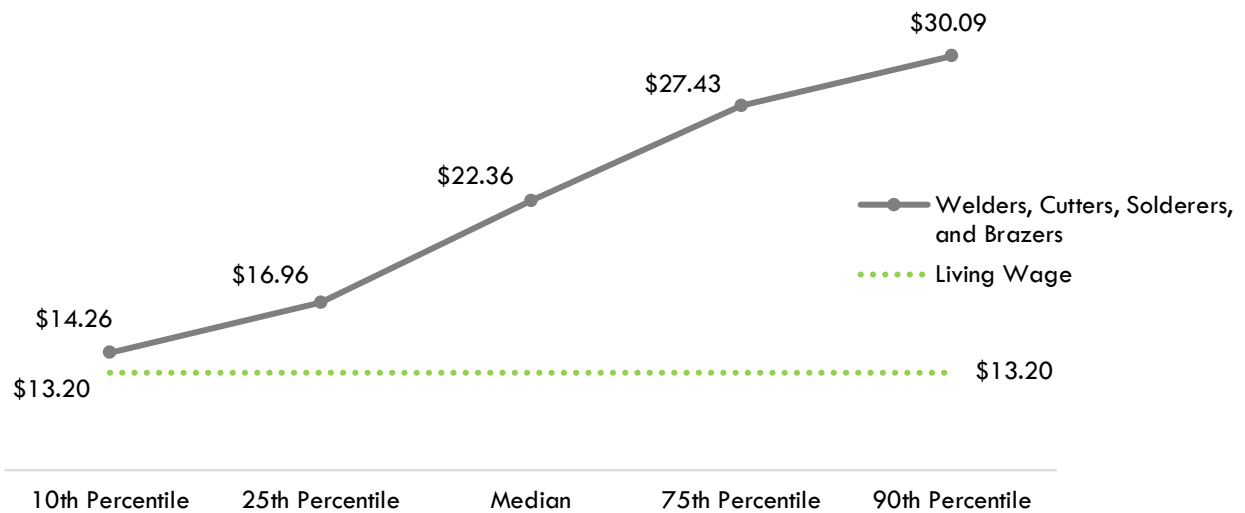
¹ The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. [bls.gov/soc](https://www.bls.gov/soc/).

² EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

Earnings

Welders, Cutters, Solderers, and Brazers receive entry-level hourly earnings of \$16.96; this is more than the living wage for a household of two adults and two school-age children in Imperial County, which is \$13.20 per hour (Exhibit 2).³

Exhibit 2: Hourly Earnings⁴ for *Welders, Cutters, Solderers, and Brazers* in Imperial County⁵



³ "California Family Needs Calculator (formerly the Self-Sufficiency Standard)," Insight: Center for Community Economic Development, last updated 2018. insightccd.org/2018-self-sufficiency-standard.

⁴ 10th and 25th percentiles could be considered entry-level wages, and 75th and 90th percentiles could be considered experienced wages for individuals who may have been in the occupation longer, received more training than others, etc.

⁵ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.⁶ There is **one** TOP code and **three** CIP codes related to *Welders, Cutters, Solderers, and Brazers* (Exhibit 3).

Exhibit 3: Related TOP and CIP Codes for Welders, Cutters, Solderers, and Brazers

TOP or CIP Code	TOP or CIP Program Title
TOP 0956.50	Welding Technology
CIP 15.0614	Welding Engineering Technology/Technician
CIP 48.0508	Welding Technology/Welder
CIP 48.0511	Metal Fabricator

According to TOP data, **one** community college supplies the region with awards for this occupation: **Imperial Valley College**. According to CIP data, **one** non-community-college institution supplies the region with awards: **CET-EI Centro** (Exhibit 4).

**Exhibit 4: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions
(Program Year 2014-15 through PY2018-19 Average)**

TOP or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards (PY16-17 to PY18-19)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY18-19)
0956.50	Welding Technology	24	0	24
	• Imperial Valley	24	0	
48.0508	Welding Technology/Welder	0	69	69
	• CET-EI Centro	0	69	
			Total	93

⁶ TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).

Demand vs. Supply

Comparing labor demand (annual openings) with labor supply⁷ suggests there is an **oversupply** for this occupation in Imperial County, with 11 annual openings and 93 awards. Comparatively, there are 3,306 annual openings in California and 2,334 awards, suggesting that there is a supply gap across the state⁸ (Exhibit 5).

Exhibit 5: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

Community Colleges and Other Postsecondary Educational Institutions	Demand (Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
Imperial	11	93	82
California	3,306	2,334	972

Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

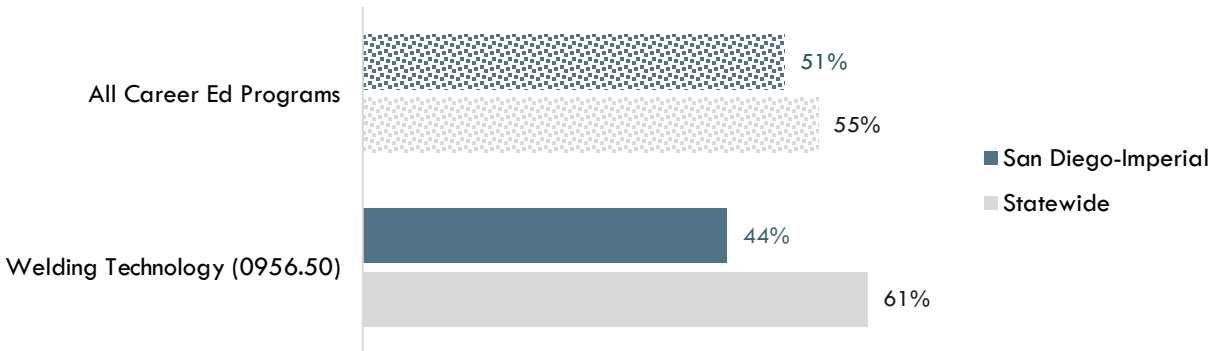
⁷ Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.

⁸ "Supply and Demand," Centers of Excellence Student Outcomes, coecc.net/Supply-and-Demand.aspx.

Student Outcomes and Regional Comparisons

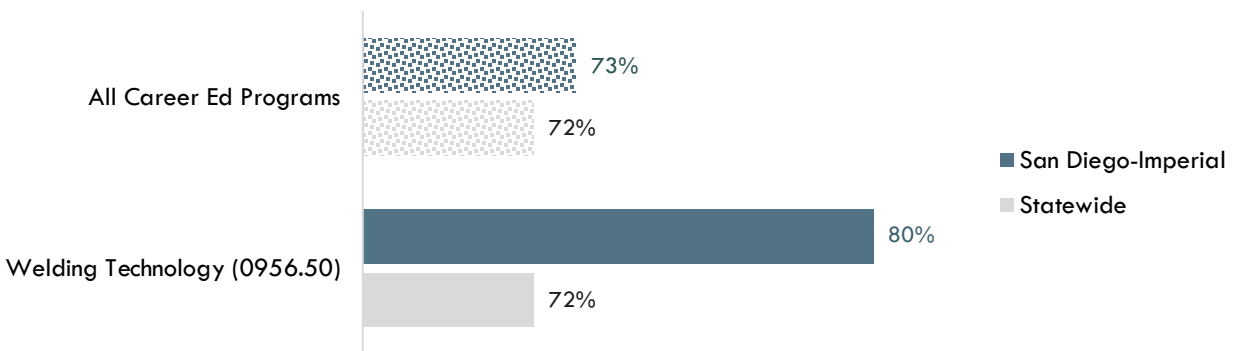
According to the California Community Colleges LaunchBoard, 44 percent of students in the San Diego-Imperial region earned a living wage after completing a Welding Technology (TOP 0956.50) program, compared to 61 percent statewide and 55 percent of students in Career Education programs in general across the state (Exhibit 6a).⁹

Exhibit 6a: Percentage of Students Who Earned a Living Wage by Program, PY2017-18¹⁰



According to the California Community Colleges LaunchBoard, 80 percent of students in the San Diego-Imperial region obtained a job closely related to their field of study after completing a Welding Technology (TOP 0956.50) program, compared to 72 percent statewide and 72 percent of students in Career Education programs in general across the state (Exhibit 6b).¹¹

Exhibit 6b: Percentage of Students in a Job Closely Related to Field of Study by Program, PY2016-17¹²



⁹ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹⁰ Among completers and skills builders who exited, the proportion of students who attained a living wage.

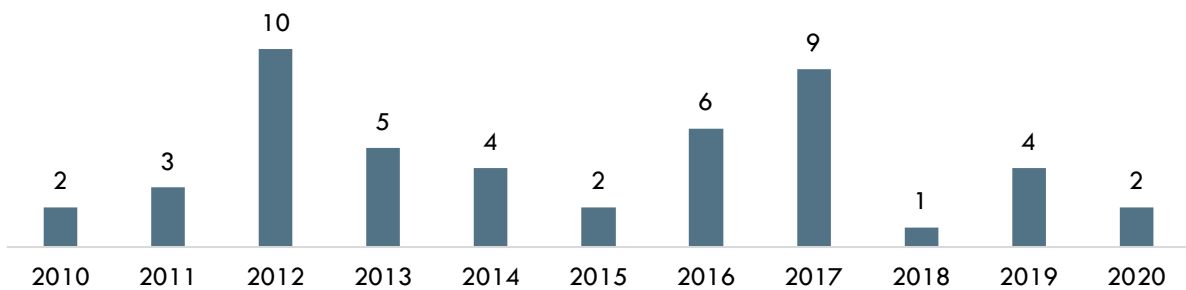
¹¹ "California Community Colleges Strong Workforce Program," California Community Colleges, calpassplus.org/LaunchBoard/SWP.aspx.

¹² Most recent year with available data is Program Year 2016-17. Percentage of Students in a Job Closely Related to Field of Study: Among students who responded to the CTEOS, the percentage reporting employment in the same or similar field as their program of study.

Online Job Postings

This report analyzes not only historical and projected (traditional LMI) data, but also recent data from online job postings (real-time LMI). Online job postings may provide additional insight about recent changes in the labor market that are not captured by historical data. Between 2010 and 2020, there was an average of **four** online job postings per year for *Welders, Cutters, Solderers, and Brazers* in Imperial County (Exhibit 7). Please note that online job postings do **not** equal labor market demand; demand is represented by annual job openings (see Exhibit 1). Employers may post a position multiple times for various reasons, such as increasing the pool of applicants, for example.

Exhibit 7: Number of Online Job Postings for Welders, Cutters, Solderers, and Brazers in Imperial County (2010-2020)¹³



Top Employers

Between January 1, 2018 and December 31, 2020, the top employers in Imperial County for this occupation were **Rain For Rent** and **360 Industrial Services** based on online job postings (Exhibit 8).

Exhibit 8: Top Employers in Imperial County for Welders, Cutters, Solderers, and Brazers¹⁴

Top Employers

- Rain For Rent
- 360 Industrial Services

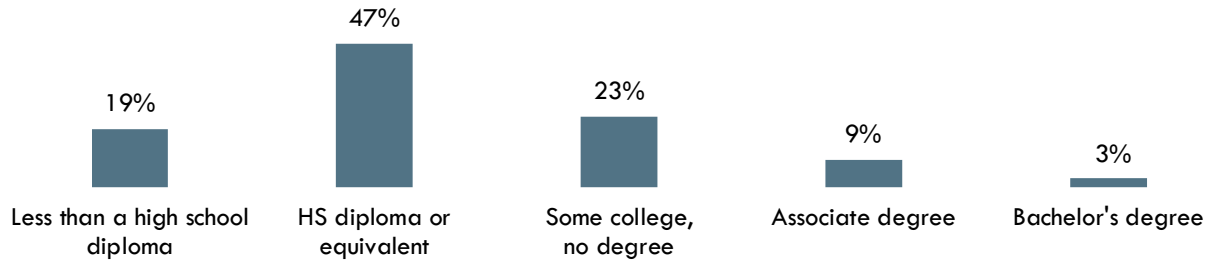
¹³ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2020.

¹⁴ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

Education, Skills, and Certifications

Exhibit 9 indicates the educational attainment for the occupation found currently in the national labor force. The typical entry-level education is a [high school diploma or equivalent](#).¹⁵

Exhibit 9: National Educational Attainment of Welders, Cutters, Solderers, and Brazers¹⁶



*numbers may not equal to 100 percent due to rounding

Exhibit 10 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2018 and December 31, 2020.

Exhibit 10: Top Skills for Welders, Cutters, Solderers, and Brazers in Imperial County¹⁷

Specialized Skills	Soft Skills	Software Skills
<ul style="list-style-type: none"> • Welding • Mig and Tig Welding • Repair • Industrial Engineering Industry Expertise • Invoicing • Oral Irrigation • Pipe Welding • Recruiting • Systems Engineering • X-Rays • Basic Tools • Deal Structuring • Forklift Operation • Gas-metal Arc Welding • Gas-tungsten Arc Welding 	<ul style="list-style-type: none"> • Physical Abilities 	<ul style="list-style-type: none"> • Microsoft Excel

¹⁵ EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.

¹⁶ "Educational Attainment for Workers 25 Years and Older by Detailed Occupation," Bureau of Labor Statistics, last modified September 4, 2019. [bls.gov/emp/tables/educational-attainment.htm](https://www.bls.gov/emp/tables/educational-attainment.htm).

¹⁷ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

Exhibit 11 typically lists the top certifications that appeared in online job postings between January 1, 2018 and December 31, 2020 for this occupation. However, no online postings specified desired or required certifications.

Exhibit 11: Top Certifications for Welders, Cutters, Solderers, and Brazers in Imperial County¹⁸

Top Certifications in Online Job Postings

N/A

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¹⁸ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2018-2020.

Important Disclaimers

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

This workforce demand report uses state and federal job projection data that was developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.