

ENERGY

WORKFORCE OF JEFFERSON COUNTY, COLORADO



Industry Description and Employment Trends

Jefferson County is uniquely positioned as a leader in the energy industry. The county's energy industry includes companies involved in the extraction of naturally occurring fuels used to produce energy as well as the generation, transmission, and distribution of energy resources. The county's energy companies also provide mining, exploration, and related support services. Additionally, energy companies in this industry develop and deliver products and technologies across solar, wind, biomass, fuel cells, and hydroelectric resources that improve operational performance, efficiency, or productivity. Companies that manufacture renewable energy equipment, storage, and power transformers, as well as provide energy-related research are also included.

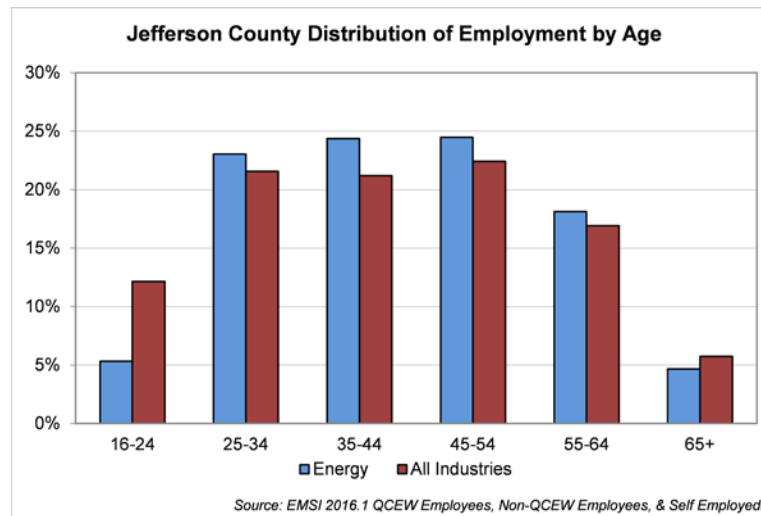
Employment in the nine-county Metro Denver and Northern Colorado region's¹ energy industry rose 5 percent in 2015. From 2010 to 2015, the region's energy employment rose 37.7 percent. More than 15 percent of the energy employment in the nine-county region is located in Jefferson County.

¹The nine-county region is comprised of two principal areas, Metro Denver and Northern Colorado. Metro Denver consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties. Northern Colorado consists of Larimer and Weld counties.

Workforce Profile

Jefferson County's labor force includes nearly 311,500 individuals, representing 19 percent of the total labor force in Metro Denver and 11 percent of the state's labor force. Jefferson County's labor force includes a large pool of talented, well-educated, and highly skilled workers. Of Jefferson County's adult population, 42 percent are college graduates and 94.1 percent have graduated from high school. Jefferson County's energy industry has a larger share of employees that are between the ages of 25 and 64 years old (90 percent), compared with the age distribution across all industries (82.1 percent).

The energy industry offers occupations across a diverse spectrum of educational attainment. Approximately 39 percent of energy-related occupations in Jefferson County require a bachelor's degree or higher, while 44.1 percent require a high school diploma or equivalent. Of the energy-related occupations, 35.8 percent require some sort of on-the-job training.



Wages 20 Largest Energy Occupations in Jefferson County	Median Salary	10th Percentile Salary	25th Percentile Salary	75th Percentile Salary	90th Percentile Salary
1. Electricians	\$46,113	\$28,818	\$34,567	\$60,209	\$73,291
2. Plumbers, Pipefitters, & Steamfitters	\$44,197	\$30,615	\$34,700	\$53,938	\$62,644
3. Civil Engineers	\$74,065	\$49,521	\$59,726	\$93,778	\$114,016
4. Secretaries & Administrative Assistants, Except Legal, Medical, & Executive	\$34,448	\$22,174	\$27,436	\$42,775	\$50,947
5. Construction Laborers	\$30,062	\$22,291	\$26,114	\$34,418	\$39,874
6. Mechanical Engineers	\$82,181	\$52,182	\$65,941	\$109,207	\$136,371
7. Business Operations Specialists, All Other	\$70,617	\$37,878	\$50,886	\$92,639	\$119,831
8. General & Operations Managers	\$105,047	\$49,563	\$70,421	\$164,166	\$237,120
9. Heating, Air Conditioning, & Refrigeration Mechanics & Installers	\$44,091	\$29,286	\$37,209	\$51,877	\$57,331
10. First-Line Supervisors of Construction Trades & Extraction Workers	\$54,866	\$35,664	\$44,269	\$68,131	\$81,473
11. Management Analysts	\$69,230	\$42,527	\$55,598	\$88,217	\$121,649
12. Electrical Power-Line Installers & Repairers	\$72,198	\$40,271	\$52,028	\$82,250	\$88,079
13. Accountants & Auditors	\$62,096	\$38,096	\$47,330	\$80,883	\$102,307
14. Electrical Engineers	\$88,264	\$57,598	\$70,671	\$109,629	\$132,919
15. Construction Managers	\$63,881	\$41,705	\$50,460	\$81,967	\$98,964
16. Office Clerks, General	\$32,261	\$19,476	\$24,788	\$43,116	\$54,850
17. Carpenters	\$35,182	\$24,910	\$29,143	\$39,884	\$44,918
18. Bookkeeping, Accounting, & Auditing Clerks	\$34,904	\$22,769	\$27,787	\$43,494	\$52,572
19. Sales Representatives, Services, All Other	\$49,564	\$22,680	\$33,232	\$72,900	\$106,468
20. Software Developers, Applications	\$91,307	\$59,057	\$73,147	\$111,418	\$133,592

Wages & Occupations

The 2015 average annual salary of energy workers in Jefferson County was \$91,800, compared with the average of \$51,300 for all workers in Jefferson County. The table below includes data for the 20 largest energy occupations in the county. It portrays the industry workforce supply as consisting of three main components: those currently working in that occupation either in the industry or in a similar job in some other industry (total working across all industries); the number of available applicants that would like to be working in that occupation; and the number of recent graduates that are qualified for that occupation.



Occupation Data 20 Largest Energy Occupations in Jefferson County	Total Working Across All Industries (2015)	Number of Available Applicants (2016)¹	Number of Graduates (2014)²	2015-2020 Projected Occupation Growth Rate
1. <i>Electricians</i>	2,233	49	863	8.1%
2. <i>Plumbers, Pipefitters, & Steamfitters</i>	873	7	393	7.2%
3. <i>Civil Engineers</i>	812	34	469	15.0%
4. <i>Secretaries & Administrative Assistants, Except Legal, Medical, & Executive</i>	5,526	83	70	8.4%
5. <i>Construction Laborers</i>	2,825	109	33	5.1%
6. <i>Mechanical Engineers</i>	1,137	65	650	5.7%
7. <i>Business Operations Specialists, All Other</i>	4,609	107	49	3.5%
8. <i>General & Operations Managers</i>	3,774	206	9,551	7.4%
9. <i>Heating, Air Conditioning, & Refrigeration Mechanics & Installers</i>	574	13	294	7.1%
10. <i>First-Line Supervisors of Construction Trades & Extraction Workers</i>	1,395	53	1,360	1.6%
11. <i>Management Analysts</i>	1,537	39	9,358	17.8%
12. <i>Electrical Power-Line Installers & Repairers</i>	366	2	0	2.7%
13. <i>Accountants & Auditors</i>	3,531	27	1,124	6.3%
14. <i>Electrical Engineers</i>	522	31	424	8.8%
15. <i>Construction Managers</i>	936	50	9,379	-1.0%
16. <i>Office Clerks, General</i>	3,169	196	0	10.0%
17. <i>Carpenters</i>	2,146	35	52	2.3%
18. <i>Bookkeeping, Accounting, & Auditing Clerks</i>	2,764	146	352	7.3%
19. <i>Sales Representatives, Services, All Other</i>	1,960	141	52	8.2%
20. <i>Software Developers, Applications</i>	2,227	43	1,478	11.0%

¹The number of available applicants is a point-in-time measurement of the number of people who have registered in Colorado's workforce development system's statewide database, Connecting Colorado, as being able and available to work in a particular occupation. Results should be interpreted with caution since registration in Connecting Colorado is self-reported. In addition, the skills rubric may assign up to four occupation codes for each registrant. Therefore, the number of available applicants could be inflated.

²The number of graduates represents a 10-county region consisting of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, and Weld Counties. Sources: EMSI 2016.1 QCEW Employees, Non-QCEW Employees, & Self-Employed; Connecting Colorado, 2016.

Educational Institutions

The 10-county region's² educational institutions provide an excellent support system for area businesses. There are 28 public higher education institutions in Colorado, of which eight four-year and seven two-year public institutions offering comprehensive curricula are located in the 10-county region. In addition, there are more than 100 private and religious accredited institutions and nearly 380 private occupational and technical schools offering courses in dozens of program areas throughout the state. Although not exhaustive, a list of the major, accredited educational institutions with the greatest number of graduates for the largest energy occupations in Jefferson County are included below. A directory of all higher education institutions with corresponding websites may be accessed via highered.colorado.gov.

- **Colorado State University**
www.colostate.edu
- **Colorado Technical University Online**
www.coloradotech.edu
- **University of Colorado: Boulder, Colorado Springs, Denver**
www.cu.edu
- **Colorado State University Global Campus**
www.colostate.edu
- **Metropolitan State University of Denver**
www.msudenver.edu
- **University of Denver**
www.du.edu
- **Colorado Technical University Colorado Springs**
www.coloradotech.edu/colorado-springs



- **Regis University**
www.regis.edu
- **Red Rocks Community College**
www.rrcc.edu
- **Arapahoe Community College**
www.arapahoe.edu
- **Front Range Community College**
www.frontrange.edu

²The 10-county region consists of the Metro Denver and Northern Colorado region and El Paso County.

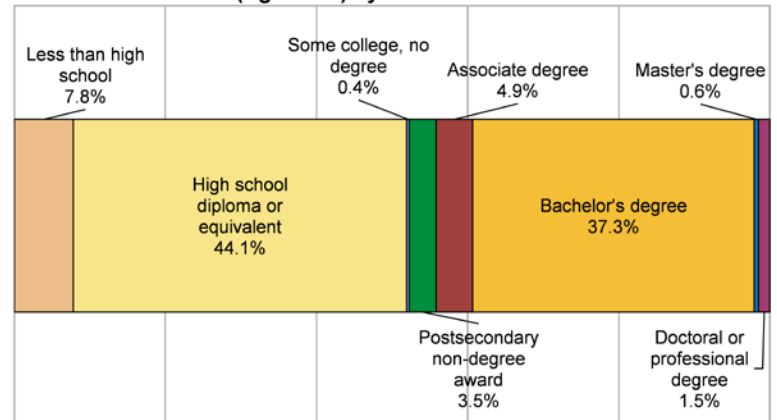


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Distribution of Jefferson County's Energy-Related Workforce (Ages 25+) by Educational Attainment



Note: These values are based on the individuals in each energy-related occupation. Source: EMSI 2016.1 QCEW Employees, Non-QCEW Employees, & Self Employed.