Getting There

Public University Programs	Adams State University	Colorado Mesa University	Colorado School of Mines	Colorado State University	Colorado State University at Pueblo	Fort Lewis College	Metropolitan State University of Denver	University of Colorado at Boulder	University of Colorado Denver & Anschutz Med.	University of Colorado at Colorado Springs	University of Northern Colorado	Western State Colorado University
Computer Science	B	B	B, G	B, G	B		B	B, G	B, G	B, G	B	B
Construction Management		B		B	B			B, G	B			
Earth Sciences	B			G							B, G	
Electrical Engineering			B, G	B, G			B	B, G	B, G	B, G		
Environmental Engineering			B, G	B, G					G			
Environmental Studies						B		G	G			B, G
Geography/GIS		B					C	B, G	B, G	B	B	B
Geology/ Geo Engineering		B	B, G	B		B	C	B, G	B			B
Geophysical Engineering			B, G									
Microbiology				B, G					B, G			
Mining Engineering			B, G									
Natural Resources Management				B, G								B
Petroleum Engineering			B, G									
Physics	B		B, G	B, G		B	B	B, G	B	B, G	B	B
Surveying & Mapping							B					

B = Bachelor's Degree, G = Graduate Degree

Junior College & Community College Programs	Aims Community College	Community College of Aurora	Community College of Denver	Northeast-ern Community College	Red Rocks Community College
Computer Science	A, C	A, C	A, C		A, C
Construction Site Management/Construction Tech	A, C				A, C
Diesel Power Mechanics		A			A, C
Earth Science			A	A	
Electrical Engineering					A
Geography/GIS		A			
Geology		A		A	A
Industrial Maintenance Technologies			C		A, C
Physics	A	A	A	A	A
Process Technology – Energy Operations	A, C				A, C
Renewable Energy/Wind/Solar Technology		C		C	A, C

C = Certificate, A = Associate's Degree

COLORADO
Department of Labor and Employment
Office of Labor Market Information

Want more Education? **www.Collegeincolorado.org**

UTILITIES

Utilities has always played a key economic role in Colorado, with vast resources in both fossil (oil, natural gas and coal) and renewable resources (wind, solar and biomass). Today our energy economy is diversifying. Labs, universities and private companies are actively researching, developing and delivering energy through every natural resource we have. There are many energy jobs for today and tomorrow in Colorado!

Start Exploring Utilities Careers

Step 1: Identify your interests
Compare your interests, skills and work values with Energy occupations using Labor Market Information's Career Explorer:
Visit www.colmigateway.com
- Click on "Services for Individuals"
- Choose "Career Services"

This will take you to "Career Explorer" where you can match your skills to occupations.

Step 2: Explore the Utilities industry & careers
Learn about high-growth, in-demand careers and what they pay on the LMI Gateway website:
www.colmigateway.com
For more information on a career in Utilities, check out www.careervoyages.org

Step 3: Find education, training & financial aid
Discover the best education or training institutions for your career goals and how to get money for school at www.collegeincolorado.org

Step 4: Find available job openings
www.connectingcolorado.com

A Day In the Life of...

Joey Caruso
Engineer II, Environmental Services
Tri-State Generation and Transmission Assn. Inc., Westminster, CO

In a typical day, I am responsible for completing environmental compliance work creating or updating operating manuals, submitting chemical sample results to regulatory agencies and tracking regulations. I utilize my degree to interpret regulations and apply technical solutions to comply with those regulations as well as reviewing and submitting design documents for compliance for mechanical systems.

The best part of my job is getting to work on such large, dynamic systems. Power plants and substations are always changing to meet demands of consumers and are in a constant cycle of operation, maintenance and upgrades. The work I do is a part of one of the world's largest, most complex machines and I enjoy seeing my efforts every time I go to turn a light on or plug in a device. Being part of a cooperative business is another plus as I get to directly serve our Member-Owners and give them the best value for their electric service into their homes and businesses.

In high school, I took chemistry, physics, and math courses. Technical electives like wood shop also gave me hands-on skills that have been very important to my career thus far. I have a Bachelor's of Science in Engineering with an Environmental Engineering Specialty. It took me 4 years to complete directly out of high school.

A Day in the Life of…

Amanda Skubal
Substation Technician Level 2
Tri-State Generation & Transmission in Frederick, CO

My typical day starts at our maintenance center at 7am where I work on my computer answering emails, doing paperwork and planning my day/week. Next I will pick up any tools or test equipment I need and head out to the field to do testing/training. The "Level 2" in my job title means I am an apprentice so I don't work alone; I'll have a more experienced journeyman or foreman with me while I test. They help to train me at the same time. I will become a journeyman technician at Level 4.

We do our testing at substations, the parts of our electrical grid system where the strength of the electricity is changed as it moves from power plants to houses and buildings. At these substations we test all the different

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Who do you want to be tomorrow?

Occupation	Wage Range (Employment)	Minimum Education/Training	Suggested Programs of Study
Accountants & Auditors *Accountants and auditors prepare and examine financial records, pay taxes and assess financial operations to ensure that organizations run efficiently.*	$44,422 / $88,824 (31,900)	Bachelor's Degree	Accounting
Maintenance & Repair Workers *Keep machines, mechanical equipment or the structure of an establishment in repair. All Energy sectors depend upon machines & mechanical equipment.*	$24,356 / $45,593 (20,040)	At least 1 year of on-the-job training	Industrial Maintenance Technologies
Construction Laborers *Perform physical labor tasks at construction sites. Install energy efficiency systems in homes & businesses to reduce energy consumption.*	$23,616 / $36,028 (18,860)	1 – 12 months on-the-job training	Renewable Energy Technology, Construction Technology Technician
Electricians *In accordance with relevant codes install, maintain & repair electrical wiring, equipment & fixtures including street lights, intercom systems or electrical control systems.*	$30,850 / $56,932 (13,880)	At least 1 year of on-the-job training (some may require a license)	Electrician
Supervisors of Construction Trades & Extraction Workers *Directly supervise & coordinate activities of construction or extraction workers.*	$44,413 / $77,669 (12,090)	Related work experience	Construction Management
Computer & Information Systems Managers *Computer and information systems managers plan, coordinate, and direct computer-related activities in an organization.*	$98,382 / $173,061 (5,910)	Bachelor's or Advanced Degree	Computer Science
Electrical Engineers *Design, develop or supervise manufacturing/installation of electrical equipment or systems for commercial, industrial, military or scientific use. In high demand in all sectors of Energy.*	$64,940 / $113,545 (3,690)	Bachelor's Degree	Electrical Engineering
Oil & Gas Roustabouts *Assemble or repair oil field equipment using hand/power tools. Perform other tasks as needed.*	$30,057 / $44,563 (3,520)	1 – 12 months on-the-job training	Process Technology - Energy Operations
Mobile Heavy Equipment Mechanics *Diagnose, adjust, repair or overhaul mobile mechanical, hydraulic & pneumatic equipment used in construction, logging & surface mining in oil & gas & mining.*	$34,253 / $54,954 (2,760)	Post-secondary vocational training	Diesel Power Mechanics
Geoscientists *Study the composition, structure & other physical aspects of the earth in exploration for oil, gas, minerals or underground water.*	$58,281 / $134,854 (2,600)	Bachelor's Degree	Environmental Studies, with a Concentration on Energy, Physics, Geology, Earth Sciences, Environmental Engineering
Environmental Engineers *Environmental engineers use the principles of engineering, soil science, biology, and chemistry to develop solutions to environmental problems.*	$57,487 / $101,194 (2,040)	Bachelor's Degree	Mathematics, Electrical Engineering, Petroleum Engineering, Geophysical Engineering, Mining Engineering
Petroleum Engineers *Devise ways to improve oil/gas production & determine needs for new/modified tool designs. Oversee drilling/offer technical advice, achieving economical & satisfactory progress.*	$88,095 / $183,896 (1,850)	Bachelor's Degree	Petroleum Engineering, Geological Engineering, Geophysical Engineering, Mining Engineering, Natural Resources Management
Gas & Power Plant Operators *Control distribution or processing gas for utility companies; or control, operate, or maintain machinery to generate electric power*	$54,993 / $78,909 (1,270)	At least 1 year on-the-job training	Process Technology - Energy Operations
Excavating & Loading Machine & Dragline Operators *Operate or tend machinery equipped with scoops, shovels or buckets, to excavate & load loose materials.*	$31,203 / $49,020 (930)	1 – 12 months on-the-job training	Construction Technology Technician
Pipelayers *Lay pipe for storm or sanitation sewers, drains & water mains. May grade trenches or culverts, position pipe or seal joints. Necessary for construction of refineries of petroleum-based fuels.*	$30,253 / $44,223 (910)	1 – 12 months on-the-job training	Apprenticeship
Wellhead Pumpers *Operate power pumps & auxiliary equipment to produce flow of oil or gas from wells in the field.*	$39,700 / $60,532 (770)	1 – 12 months on-the-job training	Process Technology - Energy Operations
Cartographers & Photogrammetrists *Collect, analyze & interpret geographic information provided by surveys, aerial photographs & satellite data. Research, study & prepare maps/other spatial data; work with GIS.*	$48,327 / $81,586 (660)	Bachelor's Degree	Geography &/or Geographic Information Systems (GIS), Surveying & Mapping

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equipment to confirm that everything is in working order and calibrated correctly. Sometimes we will spend a whole day at one substation but other times we will drive around and go to two or three different substations. When testing is finished we make sure we have all of our test results documented.

The best part of my job is the varied schedule. I don't perform the same tasks or work on the same equipment every day, and travel to different places is fun as well. I enjoy working outside.

In high school, any math and computer classes were super helpful. A solid knowledge of trigonometry, and calculus as well as spreadsheets, databases, and how software works helps a lot because most of my testing is done through various computer software programs. I have a bachelor's degree however usually an Associate's Degree and/or work experience is required to perform my job.