Career Connections

Energy Engineers

Description of Work

Design, develop, or evaluate energy-related projects or programs to reduce energy costs or improve energy efficiency during the designing, building, or remodeling stages of construction. May specialize in electrical systems; heating, ventilation, and air-conditioning (HVAC) systems; green buildings; lighting; air quality; or energy procurement.

A Day in the Life (Some Typical Activities)

Advise others regarding green practices or environmental concerns. Analyze energy usage data. Monitor industrial energy consumption or management. Direct energy production or management activities. Inspect equipment or systems. Create models of engineering designs or methods. Research energy production, use, or conservation. Evaluate plans or specifications to determine technological or environmental implications. Prepare technical or operational reports. Purchase materials, equipment, or other resources. Train personnel on proper operational procedures. Research design or application of green technologies. Perform marketing activities. Operate computer systems. Recommend technical design or process changes to improve efficiency, quality, or performance.

Skills needed

- Reading Comprehension - Reading work-related information.
- Critical Thinking - Thinking about the pros and cons of different ways to solve a problem.
- Active Listening - Listening to others, not interrupting, and asking good questions.
- Systems Analysis - Figuring out how a system should work and how changes in the future will affect it.

Annual Projected Job Openings (CA)

630

Annual Projected Job Openings (USA)

3,300

CA Wages

$57,340–$160,290

USA Wages

$52,570–$152,970

Required Education (To Start)

- Some states require an occupational license to work in this career.
- Bachelor's degree.

Desired Experience

No specific work experience required to start.

Source: CareerOneStop.

Energy Engineers

Skills needed (continued)

- Writing - Writing things for coworkers or customers.
- Complex Problem Solving - Noticing a problem and figuring out the best way to solve it.
- Monitoring - Keeping track of how well people and/or groups are doing in order to make improvements.
- Speaking - Talking to others.
- Mathematics - Using math to solve problems.
- Active Learning - Figuring out how to use new ideas or things.
- Science - Using scientific rules and strategies to solve problems.
- Systems Evaluation - Measuring how well a system is working and how to improve it.
- Judgment and Decision Making - Thinking about the pros and cons of different options and picking the best one.
- Operations Analysis - Figuring out what a product or service needs to be able to do.