New York State Green Occupation Spotlight

Energy Engineers

What do they do?

Energy Engineers are just one of many green engineers not classified elsewhere, such as: Biochemical Engineers; Manufacturing Engineers; Microsystems Engineers; Photonics Engineers; Robotics Engineers; Nanosystems Engineers; Wind Energy Engineers; and Solar Energy Systems Engineers.

General Description

On average, how many openings are there per year?

There are some 50 openings annually for energy engineers.

What is a typical entry-level wage?

$39.93 hourly, $83,050 annually

How should I prepare for the job?

Almost all energy engineers have a bachelor's degree, usually in mechanical, electrical or chemical engineering (or a related science). An energy engineer may also pursue additional education in energy management.

What types of employers might hire me?

Typical employers include management and consulting companies, energy companies, architecture and engineering firms and real estate owners and managers.

Where can I get training?*

In addition to the education needed to be an engineer, a prospective energy engineer would need to complete courses and/or training specific to energy engineering. Examples of institutions that offer these programs are:

- New York Institute of Technology
- Association of Energy Engineers

*See a more complete list of training providers at **www.greencareersny.com**

Green Description

How many energy engineers are involved in green business in New York State?

In professional services, close to 100 green energy engineers work at some 40 businesses.

What do employers say about recruiting them?

Over half of the businesses in professional services that hire green energy engineers report having difficulty recruiting qualified workers for these jobs.

What kind of green activities would I do?

While some green energy engineers specialize in a single area such as building retrofitting or solar energy, most are fully involved in all types of energy efficiency and renewable energy activities.

How would I get the skills to do green projects?

All businesses (in professional services) that hire energy engineers require employees to acquire new or enhanced skills to perform a green job. The most common sources of these skills are through through on-the-job training and professional trade associations. In addition, advanced degree coursework at a university is an important source of advanced skills.

For more Information about this occupation go to:

- www.onetonline.org/link/summary/17-2199.03
- www.bls.gov/oes/current/oes172199.htm
- www.nycareerzone.org/cz/search.jsp?query=Engineers+All+other&x=44&y=10

Case Study

Energy engineers look at an entire building to evaluate independent energy conservation measures. They 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.

They may specialize in electrical systems; heating, ventilation, and air-conditioning (HVAC) systems; green buildings; lighting; air quality; or energy procurement. Or, they may study how these systems interact with each other.

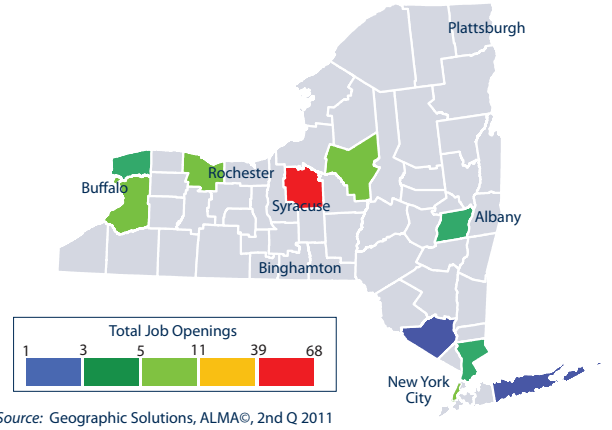
Industry employers note to be an energy engineer takes a great deal of sophistication and that it requires a substantial amount of training. As one employer said, "These are specialists -- I call them energy specialists."

Energy engineers typically utilize computer-assisted energy modeling. They need to be good with details and accuracy; imputing the right information is critical to correct energy modeling.

For more information about green jobs, go to:

- Green Careers NY: **www.greencareersny.com**
- Labor Statistics: **www.labor.ny.gov/stats/green**

Job Ads for Energy Engineers



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