STEM Careers Coalition™

STUDENT ACTIVATION

Renewable Energy Engineer

With the ever-increasing global population and the subsequent energy demands, we need professionals who can research innovative energy sources and are able to develop long term energy solutions. Those professionals are **renewable energy engineers**.

RENEWABLE ENERGY ENGINEER[1]

Renewable energy engineers research and develop methods for producing energy from renewable or sustainable sources. Some examples of **renewable energy** are solar power, wind power, hydropower, and geothermal energy. These engineers work on designing new machines, developing innovative processes, and discovering efficiencies, all with the goal of producing energy that has a minimal impact on the environment. **Renewable energy engineers** are found in all facets of sustainable energy production—project planning, research and development, equipment installation and testing, working with energy providers, and more!

Renewable Energy

Energy from a source that is not depleted once it is used (i.e., solar, wind, etc.).

Nonrenewable Energy:

Energy from a source that cannot be replaced at a rate that keeps up with consumption (i.e., coal, petroleum, etc.).

IS RENEWABLE ENERGY ENGINEER A GOOD CAREER FOR ME?

Me	Renewable Energy Engineer
I have a passion for sustainability and the environment.	Renewable energy engineers work to create new energy solutions with a minimal impact on the environment.
I like finding new ways to do things.	Renewable energy engineers are innovative.
I have a curious mind. I like to predict and solve big problems.	Renewable energy engineers are skilled at solving complex problems.
I like working with my hands and figuring out how things work.	Renewable energy engineers are comfortable with new technologies and the mechanics of energy equipment.
I am interested in STEM subjects at school.	Renewable energy engineers study in fields such as engineering, technology, math, and physics.

How does this career help me?	How does this career help the world?[2]
Every family needs energy, and depending on the family's location, some forms of energy are more available and cost-effective than others. Renewable energy sources provide affordable and stable energy sources to many families across the country. An added benefit to all is the decrease in pollution!	According to the United Nations, the global population is projected to be at or above 8.5 billion people by the year 2030. At the current rate we are using energy, our **nonrenewable energy** sources will deplete faster than we can account for. It will be imperative to have professionals at work to develop new and renewable forms of energy for our world.

What are some related careers?
Field engineers leave the office and actively work on job sites installing, repairing, and maintaining equipment.
Solar installers are typically construction workers, electricians, or mechanics who are certified to work with, install, and maintain solar panels on residential roofs.
Wind farm developers are talented project managers with a knack for securing investments. They navigate procuring land and following regulations to clean up the electrical grid by producing clean energy by harnessing the power produced by wind.

Here are ways to practice the skills to be a successful **renewable energy engineer**:

- Meet with your guidance counselor to review your class schedule and course choices. Figure out where you can fit in environmental sciences, advanced math classes, engineering experiences, or technology courses.
- Seek out internships working with environmental conservation groups, renewable energy associations or government PACs. Pay attention to the goals and processes of the organization and make sure they align with why you want to enter the renewable energy field.
- Research the various forms of renewable energy and become informed about the renewable energy field. Determine which form(s) of energy interest you the most, and make sure you know what is involved in preparing yourself for a career in that field.

[1] https://bit.ly/3H1U1Em

[2] https://www.un.org/en/development/desa/population/publications/pdf/trends/Population2030.pdf