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Tips on Seeking a Renewable Energy Degree

With jobseekers across the globe considering clean energy careers, how do they know where to begin?

by Jennifer Runyon, Managing Editor

New Hampshire, USA --

September is back to school month for many in the U.S. and elsewhere. As one season fades into the next, it's time for new beginnings and fresh thinking. Change is in the air and for some that means thinking about a career in clean energy.

Many analysts predict that by 2020 the global clean energy economy will top one trillion dollars. With that much money on the table, it's no surprise that people all over the world are wondering how they might join this vibrant new field. And green jobs may be more lucrative, too. According to the Council of Economic Advisers, [green jobs pay an average of 10 to 20% more than other jobs](#).

"Green expertise makes an excellent overlay on almost any existing career," said Kristen Bacorn, a nationally recognized educator and LEED certified building expert.

Bacorn believes that almost anyone can benefit from learning about the green economy. "To give an example from my own career as an educator and consultant, I earn more from green education and consulting than from conventional education and consulting," she said.

Bacorn teaches courses designed for real estate professionals and others on topics such as green building, environmental regulation and green appraisal among others. She is part of a growing trend of educators, institutions and training programs focusing on the clean energy industry.

Advice for Jobseekers

Most human resource experts explain that before jumping into a new degree program, individuals must first decide what type of work they want to pursue.

"I am not a big advocate of people getting education 'on spec,' without a planned career objective," said Bacorn. "Prospective students should invest a little time looking into what jobs are growing, what qualifications are required for those jobs, and -- most of all -- what job they would find fulfilling,"

For many, that may mean simply using the skills they already have and applying them to a renewable energy or clean tech company.

An accountant is an accountant in any industry and may easily be able to switch tasks from one industry to the next. The same would apply to support personnel in large corporations and entry-level positions in departments such as human resource management, marketing and PR.

"Renewable energy businesses need accountants, administrative assistants, lawyers, sales people, managers, etc.," said Pat Fox, Director of Operations at the [Interstate Renewable Energy Council \(IREC\)](#).

Like Bacorn, Fox believes that a small amount of clean energy training can help those wishing to apply their skills to the renewable energy market. "So, if someone has these basic skills that will translate well, they should look for training/educational programs that can give them foundational knowledge of renewable energy," she said.

For those who are looking to get their hands into the actual transition from traditional energy to clean energy -- project managers, engineers, financiers, installers, operations and maintenance workers and higher-level positions like VPs of sales, business development or marketing -- more comprehensive renewable-energy specific knowledge will almost always be necessary.

Before you start a program however, you must first decide what industry interests you most. "Clean Energy" is a broad topic and includes everything from large and small wind power to solar power technologies like PV, CSP and solar thermal to geothermal, biofuels, hydro, ocean and biomass energy. Even more broadly, clean tech encompasses energy efficiency, smart grid and green building.

One good way to become informed about the clean energy economy is to follow the news of the industry, said Fox. "So, in addition to education," she said, "I recommend that people get informed and involved. Join national renewable energy organizations in your area of interest; attend local and national conferences; and stay up with the news through [industry] publications," she said.

Taking the Plunge: Renewable Energy Degree or Training?

Deciding between a short training program or a full-fledged multi-year degree program then comes back to the type of job a person seeks. "To become an installer or to go into technical sales, a training program should work well. However, to become a design engineer for a manufacturer, a degree will probably be required," said Fox.

Bacorn is bullish on green building. She said that becoming a LEED Green Associate adds an impressive credential to any resume in almost any sector. Furthermore, courses can be found online, in colleges or adult education classes all over the U.S. "The Green Associate exam is very hard, and it is a mistake to underestimate the study required....so look for a quality course, not a quick and dirty solution," she said.

Quality is the name of the game for IREC as well and if you are based in the U.S., the IREC website is a good source of information for educational programs. IREC has gone to great lengths to compile lists of university programs and training organizations to help those who wish to enter the clean energy workforce. Its [university link](#) offers 39 universities with courses or complete programs in Renewable Energy. IREC's [training providers](#) list offers 132 independent and community college programs that help train installers in all technologies.

While IREC hasn't evaluated the university programs (it's a voluntary listing where entities can set up an account and list their programs), they have awarded some training programs with ISPQ (Institute for Sustainable Power Quality) Accreditation, which is IREC's "gold star of approval" for any program. You can see which programs are ISPQ accredited by visiting the [ISPQ Awardees page](#) on the IREC site.

For those thinking about jumping into the industry but are unsure where to start, Bacorn recommends taking a creative approach. "If I were going to sell a product, wouldn't it be great to sell something people were required by law to buy? [It is] the same with jobs. There is a lot of new legislation occurring on the [U.S.] federal, state and local level, and much of it involves jobs," she said.

She sees a huge amount of growth potential in the area of green building and is particularly excited about the [new ASHRAE 189.1 standard](#), which will require all buildings to operate more efficiently. Similar standards are being adopted in Europe, too. "The implication for jobseekers is that there will be more demand for green building professionals, such as renewable specialists, commissioning agents, air testing technicians, HVAC engineers, computer modeling experts, green product suppliers and many more," she said.

A Listing of University Programs

To those in search of more education to help further their careers in this industry there are a plethora of renewable energy programs available. Some of these were mentioned in our first article on this topic, which came out in December 2008: [More Universities Offering Master's Degrees Renewable Energy Programs](#). Programs listed in that article are not listed here.

Since then, all across the globe, even more universities are offering clean tech programs or renewable energy tracks in their existing degree programs. Some are even starting new degree programs all together. While not exhaustive, a list of programs is below. Many offer programs that can be completed online. Please feel free to use the comment section to include other programs not listed here.

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[IREC lists 39 U.S. University Programs at this site](#). In addition to those, here are a few more: