Career PATHWAYS

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Career Pathways explores high-demand careers and the local people who work in them.

Read all about it and see if one is for you!

AUXILIARY EQUIPMENT OPERATOR

ABOUT:
NUCLEAR ENERGY CAREERS

Harness the hidden energy of the Universe! Today, 103 commercial nuclear power plants in the United States supply about 20 percent of the Nation's electricity each year. Located at 64 sites in 31 states, nuclear power plants are the second largest source of electricity in the U.S.

Careers in nuclear energy offer challenging work with competitive salaries and benefits. The industry needs engineers, technicians, craft workers and other professionals in positions ranging from entry-level to mid-career and those with military training and service.

TOOLS OF THE TRADE:

Sometimes A.E.O.'s use state-of-the-art technology and other times deal with older technology. A.E.O's always use hand tools like pipe wrenches and screw drivers. They install gauges, sometimes digital, sometimes analog. They use hand-held computers to collect data on equipment, and use desk top computers to track and trend data. A.E.O.'s have to understand how a simple network works and how to get what they're looking for.

MEET A AUXILIARY EQUIPMENT OPERATOR

Steve Ashley was hired at the Cook Nuclear Plant in 1996 as a Fire Protection Technician. He has a unique background compared to many of his colleagues who received training through the U.S. Navy. Steve holds an Aviation Technology degree from Andrews University and earned his commercial pilot's license. His technical training, in addition to his experience as a volunteer firefighter made him a good fit for Cook's Fire Brigade.

Steve was promoted in 2001 to an Auxiliary Equipment Operator (A.E.O.). A.E.O.'s are non-licensed operators, which means they manipulate the plant but can't directly affect the activity without permission from a licensed operator.

"There is a lot of variety in this job," said Steve. "It keeps us going. You could be dealing with radioactive water in a pump or a steam system you're going to realign. Ten minutes later you could be dumping zebra mussels out of a basket. We drive fork lifts and bucket trucks. We interact with almost every other aspect of the plant. Anybody that's a tinkerer, like people who work on motors, they're going to do well"

Steve and his colleagues take pride in "always having to be perfect. Perfection is the minimal acceptable standard. "It's a big deal. Even small things are taken very seriously. We have to have a huge margin of safety. We never want to be close to being in a dangerous situation."

Steve remembers when the plant was first built. "I remember my parents talking about it and going to the visitor center. The phrase was 'electricity too cheap to meter'".

A DAY IN THE LIFE

Each day begins with briefings about safety, plant status, and what's on the schedule. "I always find the guy I'm relieving and talk about what happened on his or her shift. Communication here is very important. We use formal, three-way communication. If I give direction, they repeat to me what they heard and I confirm that they have it correct, so we know what to expect from each other. If we don't get what we expect we know there's a problem."

A.E.O.'s have a lot of interaction with other employees. Various employees are assigned to tour the equipment, and the building is divided by section. Everybody has an area they're responsible for monitoring. Formal written requests are made and go through a strict approval process. "The process becomes ingrained".

One of the biggest challenges is the work schedule. A.E.O.'s often work on holidays. They are on shift for two, 36-hour weeks and two, 48-hour weeks. Then they attend week-long training sessions. They also rotate days and nights. "That can be a challenge on our mental state and on family life but for every five-week cycle there are seven days in a row you don't have to come into work and it's like getting a vacation every five weeks!"

Day-to-day operations involve a lot of flipping of switches, turning dials and watching lights change. "It's tedious, but incredibly important. It's a lot like aviation industry. A three-hour flight mostly involves listening to the drone of the engine, but if anything happens you have know what to do."

EDUCATION AND SKILLS REQUIRED

Many nuclear energy workers are hired after serving in the U.S. Navy, but local colleges also offer degree programs to train for this field. According to Steve, "it seems to be difficult to find qualified candidates. Employees need to pass many tests to determine I.Q. and aptitude. Drug use is not tolerated and nobody is going to trust you to handle a nuclear reactor if you have a criminal background. There is a new and excellent program at Lake Michigan College that is geared very much for this job."

Additionally candidates need to be self-motivated perfectionists. "You have to have high standards for yourself, good enough isn't. You have to always try to do the best you possibly can with the goal being perfect. You have to learn that early on.

New hires at Cook are designated Utility Operators. They must complete the training to become an A.E.O. The classroom training takes three-to-six months, and on-the-job training could take up to one year. After reaching A.E.O. status, employees still must receive additional training every five weeks and if they don't score 80% or better on the test, they don't go back to work. This diligent training process ensures safety for nuclear workers and the communities in which they live.

LEARN LOCALLY

Lake Michigan College
Nuclear/Nuclear Power, Technology/Technician – Associate's degree

Sienna Heights
Nuclear/Nuclear Power, Technology/Technician – Bachelor's degree

RELATED CAREERS

Reactor operators, Plant Designers, Maintenance Workers, Systems and Equipment Designers

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www.cookinfo.com

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