Energy Career Profile

Putting STEM to Work

Plant Operator

Median average salary: $77,815

Whether they are coal, nuclear, natural gas, or any other type of power plants, plant operators are responsible for keeping them running smoothly. Plant operators are in charge of operating, controlling, and monitoring the equipment that generates power in these power plants. They will be at the helm of the cutting-edge power plants of the future, with new technologies that will require new STEM skills.

What does it take to be a plant operator?

Plant operators need to develop specific skills in order to do their job well, and many of these are STEM skills. For example, plant operators must be able to:

- Adjust controls to generate the specified electrical power
- Use control boards or semi-automatic equipment to operate equipment such as boilers, turbines, generators, and reactors
- Monitor and inspect equipment for any evidence of operating problems
- Regulate conditions such as water levels based on data from instruments or computers
- Take readings from charts, meters, and gauges at set intervals

Being a plant operator means that you have the opportunity to grow in your career. You may start as an entry-level helper or assistant operator and work your way up to an operations specialist or supervisor. At each level, it is important to develop and strengthen more skills. Some of these advanced skills are:

- Understand and apply mechanical principles such as centrifugal force and heat flow
- Comprehend how entire systems function and foresee implications of own actions
- Coordinate several competing activities for efficient use of time and material
- People management and communications skills
- Computer skills for report preparation
- People management

Plant Operator

What does a plant operator do?

A plant operator's responsibilities change as their career grows. Below are examples of tasks for different stages of a plant operator career.

Entry-Level Helper

- Provide assistance to plant operators by reading gauges and checking equipment
- Make work area safe

Assistant Operator *Education Required: Apprenticeship/Experience*

- Operate and maintain auxiliary equipment
- Check gauges and levels
- Understand and work with Valves, pumps, engines, and turbines
- Understand plant processes and systems (water, electric, etc.)

Operator *Education Required: Associate's Degree*

- Ensure generating equipment runs when needed
- Prepare reports of unusual incidents or problems

Operations Supervisor *Education Required: Bachelor's Degree*

- Determine schedules and work activities of team members
- Review team member performance and provide feedback
- Inspect records and log book entries to determine plant efficiency
- Prepare and manage budgets
- Report to management
- Deal with potentially stressful situations