

## Career Pathway Spotlight

# Discover a Career as a Heavy Equipment Operator



## Discover your career in energy!

Heavy Equipment Operators are the backbone of energy infrastructure — playing a key role in developing sites where energy is generated, stored, and delivered.

### Renewable Energy Site Development

On wind and solar farm projects, Heavy Equipment Operators clear and grade project sites, excavate foundations for turbine towers and solar arrays, and build the access roads and drainage systems that make large-scale renewable projects possible.

### Power Infrastructure Construction

Building the pipelines, transmission corridors, and substations that connect energy sources to homes and businesses, Heavy Equipment Operators use equipment like excavators and cranes to install the underground and above-ground utility systems.

### Environmental Remediation & Reclamation

As legacy energy sites are cleaned up and former industrial land is reclaimed, Heavy Equipment Operators demolish old structures, safely remove contaminated materials, and restore sites for future use — including new energy development.

## CAREER PATH

### Start with:

- » A high school diploma or GED

### Get Educated:

- » An apprenticeship through a union or industry:
  - International Union of Operating Engineers (IUOE) Apprenticeship Program
  - Associated General Contractors (AGC) Apprenticeship Programs
  - Laborers' International Union of North America (LIUNA) Training Programs
- » A vocational or technical school program
- » Military service (e.g., Combat Engineer, 91L Construction Equipment Repairer)

### Specialize With:

#### Certificates or credentials

- » NCCER: Heavy Equipment Operations Certification
- » National Commission for the Certification of Crane Operators (NCCCO)
- » OSHA 30-Hour Construction Safety Certification
- » Commercial Driver's License (CDL) for hauling and transporting equipment

#### Knowledge in:

- » Pipeline construction
- » Utility trenching
- » Renewable site prep
- » Land grading
- » Substation construction

## OCCUPATIONAL SKILLS

- » Critical thinking and problem solving
- » Spatial awareness and steady coordination
- » Ability to follow technical plans
- » Communication and team-oriented attitude
- » Time management and schedule adherence
- » Attention to safety, worksite hazards, and environmental risks
- » Mechanical aptitude and basic equipment maintenance awareness

## BENEFITS

### These energy industry careers offer:

- » Varied opportunities across energy sectors
- » Upward and continued career growth
- » Work-life balance — your work stays at work
- » Opportunities for skill development and specialization
- » Unionization and leading benefits packages
- » Good pay and hands-on, critical work
- » Job stability in a growing energy industry

# What Might You Do As A Heavy Equipment Operator?

## ENTRY LEVEL

1-4 years

### What you will do:

- » Operate one or more types of heavy equipment (excavators, bulldozers, graders, loaders) under supervision
- » Perform daily pre-operation inspections and report maintenance needs to supervisors
- » Follow site safety plans, OSHA standards, and environmental compliance requirements
- » Assist with grading, trenching, and site preparation tasks
- » Read and interpret basic site plans and grade stakes
- » Maintain cleanliness and basic upkeep of assigned equipment

## MID- CAREER

5-8 years

- » Independently operate multiple types of heavy equipment on complex energy project sites
- » Read and interpret full construction plans, blueprints, and grade calculations
- » Mentor and provide guidance to entry-level operators
- » Communicate with site supervisors and project engineers on progress and challenges
- » Identify and troubleshoot equipment malfunctions in the field
- » Ensure work area safety for crew members working in proximity to equipment

## EXPERIENCED

8+ years

- » Oversee and coordinate equipment operations across large-scale energy project sites
- » Supervise teams of operators and laborers, ensuring productivity, safety, and quality
- » Collaborate with project managers on scheduling, budgeting, and logistics
- » Train new operators and enforce safety and quality standards across the worksite
- » Conduct equipment inspections and coordinate maintenance and repair schedules
- » Report to senior leadership on project progress, equipment needs, and site conditions

### What knowledge, skills and abilities will you need to succeed?

- » Ability to safely operate construction equipment in varied terrain and weather conditions
- » Be comfortable working outdoors in physically demanding conditions
- » Physical ability to climb in and out of equipment, lift materials, and work extended hours
- » Listen and follow directions from foremen and site supervisors
- » Come to work on time and prepared
- » Willingness to learn new equipment types and operating techniques

- » Proficiency operating a wide range of heavy equipment to high precision standards
- » Ability to read and interpret construction plans and technical specifications
- » Strong communication skills with supervisors, engineers, and crew members
- » Solid understanding of OSHA safety regulations and site compliance requirements
- » Ability to identify equipment wear, damage, and emerging maintenance needs
- » Problem-solving skills to adapt operations to changing field conditions

- » People management and team leadership skills
- » Financial and project management acumen
- » Ability to coordinate multiple equipment types and crews simultaneously
- » Strong communication skills with contractors, engineers, and senior leadership
- » Comprehensive knowledge of energy infrastructure construction processes
- » Computer skills to prepare reports, schedules, and performance evaluations

## GET PAID!

### Entry Level:

- » \$47,880 / year\*

### As You Gain Seniority:

- » \$62,350 / year\*

### Later in Your Career:

- » \$94,940 / year\*

\*Source: United States Energy & Employment Report (2025). These figures use the 10th, 50th, and 90th percentiles of all workers in the role as a proxy for seniority progression and for consistency with BLS OEWS and the United States Energy & Employment Report. Compensation figures should be used as a guide; actual compensation may vary depending on education, geography, experience, and many other factors.



## ENERGY INDUSTRY CAREERS OFFER:

- » Excellent salaries
- » Opportunities for advancement
- » Job growth & stability
- » Professional development and training
- » Great benefits

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