

U.S. Department of Energy - Energy Efficiency and Renewable Energy

Geothermal Technologies Program

Geothermal Development Job Types and Impacts

Workers install new piping at one of the geothermal power plants at The Geysers in northern California.

Development of geothermal power plants and direct-use applications creates a variety of jobs. And the resulting job creation and economic activity within the geothermal industry positively impacts many other areas.

Job Types

Here's a sampling of specific jobs related to geothermal development: welders; mechanics; pipe fitters; plumbers; machinists; electricians; carpenters; construction and drilling equipment operators and excavators; surveyors; architects and designers; geologists; hydrologists; electrical, mechanical, and structural engineers; HVAC technicians; food processing specialists; aquaculture and horticulture specialists; resort managers; and spa developers.

Impacts

Economic activity and job creation within the geothermal industry impact the following areas:

- Mechanical equipment and primary metal suppliers make casings for geothermal well shafts, drilling equipment, power plant equipment and controls, pumps, and transport or light-construction equipment (e.g., loaders, tractors, and trucks).
- General consultants and contractors search for geothermal resources and prepare simulations of resource availability and economic analysis so that developers can obtain financing.
- Drilling and well services firms use resource management, geoscience, and stabilization technology and expertise similar to that of the petroleum industry.
- Environmental services firms manage paperwork, permitting, well testing, water testing, air sampling, and other tasks required for regulatory approvals.
- Geothermal developers—under contract to a utility, government, or other entity to develop a project—often act as general contractors and hire other firms to do the work. This can include all facets of development, from construction site security and safety, to turnkey requirements.

Power plant ownership and operations firms may be electric utilities or independent power producers, which require trained and certified power plant operators and maintenance staff.