

Workforce Fit Newsflash



YOUR CAREER IN ENERGY

This is the first in a series of Workforce Fit Newsflashes. These Newsflashes are produced and distributed throughout the school year to students, parents, teachers, counselors, WorkOne customers, and other interested parties. Each Workforce Fit Newsflash focuses on a high wage, high demand business sector; providing important labor market information, and directing readers to related educational pathways and resources. The Workforce Fit Newsletter productions come to you through a partnership with The Western Indiana Workforce Board and WorkOne Western Indiana, serving Indiana Region 7 -Clay, Parke, Putnam, Sullivan, Vermillion, and Vigo counties. Publication contact; lisalee@workforcenet.org.

PICTURE YOURSELF- IN AN ENERGY CAREER



Every day across America people in the Energy field work hard to ensure you have the fuels needed to power the activities of your day, whether you are at school or play. Are you a person who:

- ✓ Likes identifying problems and reviewing related information to develop and evaluate options.
- ✓ Can give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times.
- ✓ Possess the ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- ✓ Can arrange things or actions in a certain order or pattern according to a specific rule.
- ✓ Is pleasant with others and displays a good-natured, cooperative attitude.

Then perhaps a career in energy is right for you! Let's learn more.



CAREERS IN ENERGY

Electrical Power-Line Installers and Repairers Tasks:

- Adhere to safety practices and procedures, such as checking equipment regularly and erecting barriers around work areas.
- Test conductors, according to electrical diagrams and specifications, to identify corresponding conductors and to prevent incorrect connections.
- Open switches or attach grounding devices to remove electrical hazards from disturbed or fallen lines or to facilitate repairs.
- Climb poles or use truck-mounted buckets to access equipment.
- Drive vehicles equipped with tools and materials to job sites.

- Identify defective sectionalizing devices, circuit breakers, fuses, voltage regulators, transformers, switches, relays, or wiring, using wiring diagrams and electrical-testing instruments.
- Install, maintain, and repair electrical distribution and transmission systems, including conduits, cables, wires, and related equipment, such as transformers, circuit breakers, and switches.
- Dig holes, using augers, and set poles, using cranes and power equipment.
- Place insulating or fireproofing materials over conductors and joints.
- Install watt-hour meters and connect service drops between power lines and consumers' facilities.

Education: Results of a recent ONet survey regarding education levels for this occupation were not available.

However, recent basic hiring requirements by Duke Energy for this position are the following:

Basic Requirements

- High school diploma or GED
- Valid driver's license
- Ability to stand a minimum of five to six hours on the ground – maybe in a bucket or line truck or at the top of a distribution pole.
- Ability to sit for a minimum of two to three hours – may be driving a truck or sitting in a manhole or an underground vault.
- Ability to move frequently to unload equipment and to install/maintain/repair equipment.
- Ability to lift up to 75 pounds.
- Ability to push/pull weights up to 75 pounds.
- Ability to frequently climb or use authorized equipment to reach various heights and breadths.
- Ability to frequently and repetitively bend/stoop/squat.
- Ability to differentiate between colors (color vision).
- Manual dexterity to operate small hand tools, turn small knobs, etc.



Electrical Engineers Tasks:

- Prepare technical drawings, specifications of electrical systems, or topographical maps to ensure that installation and operations conform to standards and customer requirements.
- Operate computer-assisted engineering or design software or equipment to perform engineering tasks.
- Confer with engineers, customers, or others to discuss existing or potential engineering projects or products.
- Direct or coordinate manufacturing, construction, installation, maintenance, support, documentation, or testing activities to ensure compliance with specifications, codes, or customer requirements.
- Design, implement, maintain, or improve electrical instruments, equipment, facilities, components, products, or systems for commercial, industrial, or domestic purposes.
- Prepare specifications for purchases of materials or equipment.
- Perform detailed calculations to compute and establish manufacturing, construction, or installation standards or specifications.
- Investigate customer or public complaints, determine nature and extent of problem, and recommend remedial measures.

- Oversee project production efforts to assure projects are completed on time and within budget.
- Plan or implement research methodology or procedures to apply principles of electrical theory to engineering projects.

Education: Results of an ONet survey: 73% have a Bachelor's degree. 13% have an Associate's degree. 6% have a Master's degree.

Biofuels Processing Technicians Tasks:

- Calculate, measure, load, or mix refined feedstock used in biofuels production.
- Operate chemical processing equipment for the production of biofuels.
- Operate equipment, such as a centrifuge, to extract biofuels products and secondary by-products or reusable fractions.
- Operate valves, pumps, engines, or generators to control and adjust biofuels production.
- Process refined feedstock with additives in fermentation or reaction process vessels.
- Assess the quality of biofuels additives for reprocessing.
- Calibrate liquid flow devices and meters including fuel, chemical, and water meters.
- Collect biofuels samples and perform routine laboratory tests or analyses to assess biofuels quality.
- Inspect biofuels plant or processing equipment regularly, recording or reporting damage and mechanical problems.
- Measure and monitor raw biofuels feedstock.

Education: Results of a recent ONet survey: 65% of people in this position have a high school degree or equivalent. 24% have a post-secondary certificate. 7% have some college, no degree.



Power Plant Operators Tasks:

- Adjust controls to generate specified electrical power or to regulate the flow of power between generating stations and substations.
- Monitor power plant equipment and indicators to detect evidence of operating problems.
- Control generator output to match the phase, frequency, or voltage of electricity supplied to panels.
- Control or maintain auxiliary equipment, such as pumps, fans, compressors, condensers, feedwater heaters, filters, or chlorinators, to supply water, fuel, lubricants, air, or auxiliary power.
- Control power generating equipment, including boilers, turbines, generators, or reactors, using control boards or semi-automatic equipment.

- Start or stop generators, auxiliary pumping equipment, turbines, or other power plant equipment as necessary.
- Open and close valves and switches in sequence to start or shut down auxiliary units.
- Communicate with systems operators to regulate and coordinate line voltages and transmission loads and frequencies.
- Inspect records or log book entries or communicate with plant personnel to assess equipment operating status.
- Regulate equipment operations and conditions, such as water levels, based on instrument data or from computers.

Education: Results of an ONet survey: 74% of people in this position have a high school degree or its equivalent. 21% have a post-secondary certificate. 3% have an Associate's degree.

Solar Energy Installation Managers Tasks:

- Supervise solar installers, technicians, and subcontractors for solar installation projects to ensure compliance with safety standards.
- Estimate materials, equipment, and personnel needed for residential or commercial solar installation projects.
- Prepare solar installation project proposals, quotes, budgets, or schedules.
- Plan and coordinate installations of photovoltaic (PV) solar and solar thermal systems to ensure conformance to codes.
- Monitor work of contractors and subcontractors to ensure projects conform to plans, specifications, schedules, or budgets.
- Assess potential solar installation sites to determine feasibility and design requirements.
- Provide technical assistance to installers, technicians, or other solar professionals in areas such as solar electric systems, solar thermal systems, electrical systems, and mechanical systems.
- Identify means to reduce costs, minimize risks, or increase efficiency of solar installation projects.
- Coordinate or schedule building inspections for solar installation projects.
- Perform start-up of systems for testing or customer implementation.

Education: Results of an ONet survey: 36% of people in this position have a Post-secondary certificate. 20% have some college. 16% have an Associate's degree.

SOURCE – O*Net Online

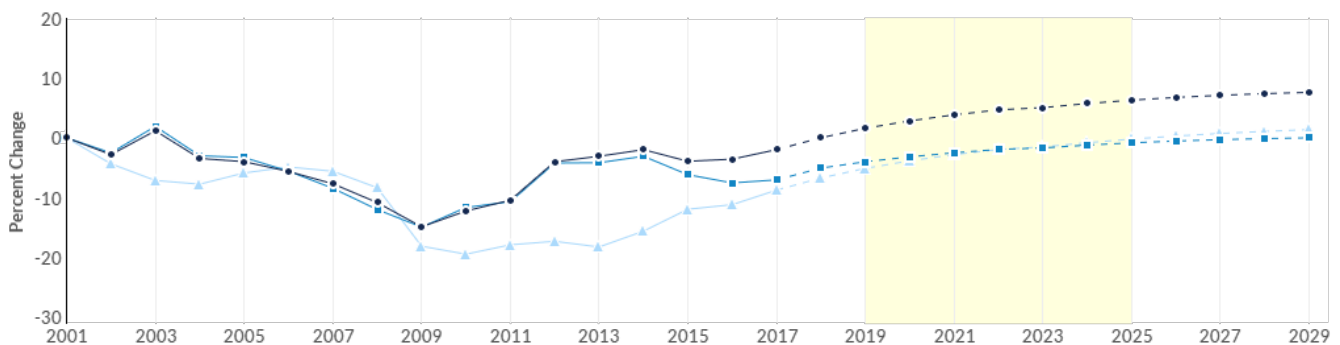
Occupational Outlook

Energy Occupations - Region 7- Wage Rates

Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
First-Line Supervisors of	\$21.39	\$29.92	\$40.65

Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Construction Trades and Extraction Workers (47-1011)			
Operating Engineers and Other Construction Equipment Operators (47-2073)	\$23.41	\$27.64	\$31.64
Electricians (47-2111)	\$19.28	\$25.59	\$34.41
Helpers--Electricians (47-3013)	\$17.52	\$27.54	\$31.20
Telecommunications Equipment Installers and Repairers, Except Line Installers (49-2022)	\$16.92	\$23.10	\$28.37
Control and Valve Installers and Repairers, Except Mechanical Door (49-9012)	\$29.07	\$37.40	\$50.14
Electrical Power-Line Installers and Repairers (49-9051)	\$28.61	\$37.05	\$46.51
Maintenance and Repair Workers, General (49-9071)	\$14.44	\$18.02	\$22.52
Welders, Cutters, Solderers, and Brazers (51-4121)	\$15.36	\$18.50	\$23.01
First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors (53-1048)	\$18.22	\$23.37	\$29.28

Regional Trends



Region	2019 Jobs	2025 Jobs	Change	% Change
● Region	3,167	3,313	146	4.6%

	Region	2019 Jobs	2025 Jobs	Change	% Change
•	Terre Haute, IN	2,562	2,646	84	3.3%
•	Fort Wayne, IN	6,138	6,456	318	5.2%

For more information about jobs in the Energy Sector and other high wage/high demand occupations contact your local WorkOne office!

