

## ATLANTA CLEAN JOB OPPORTUNITIES

# Energy Efficiency

Learn more about the growing energy efficiency sector and how to get into this type of work

Energy efficiency jobs are jobs that may involve production and installation of products or services that help reduce the amount of energy needed to run appliances, machines, vehicles, or infrastructure that people use every day. **These jobs are focused on reducing 1) the amount of energy used, 2) the cost of energy, and 3) the environmental impact of energy production.** Working in energy efficiency offers good opportunities for professional growth and competitive compensation, as well as the chance to contribute to the mitigation of the greenhouse gas emissions which are leading to climate change.

Energy efficiency jobs can be found within other industry categories, like engineering, construction, customer service, architecture, and many others—even if the words ‘energy’ or ‘efficiency’ are not part of the job title. For example, about 1 out of 5 (17%) construction workers across the country do something related to energy efficiency, even if their job title doesn’t reflect that.

In America, about half of all energy efficiency jobs are generally related to construction, 20% are related to professional services, and about 14% to manufacturing.

- ➔ In Atlanta, the energy efficiency sector saw the highest job growth between 2011 and 2020, with 20,656 additional jobs being created.
- ➔ Atlanta has also adopted bold policies to act on climate change, including achieving a 100% clean energy transition for municipal operations and community-wide by 2035.
- ➔ This means that there are more opportunities in Atlanta within this sector now than ever before, and there is a large demand for young people looking to pursue a career related to energy efficiency.



**Images 1 & 2.** Professionals installing solar panels in Washington, DC. A boom in solar and wind power jobs in the U.S. led to a global increase in renewable energy employment (Sources: Guardian, PSR)

## LEARN MORE ABOUT ENERGY EFFICIENCY JOBS

OCCUPATION	FUNCTION	PEOPLE STARTING IN THIS CAREER USUALLY HAVE	AVG. ATLANTA SALARY	AVG. U.S. SALARY	ACTIVITIES ON THE JOB	PROGRAMS THAT CAN PREPARE YOU IN ATLANTA
<b>Apprentice Electricians</b> Electrician Helper, Electrician's Helper	Help electricians by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment. Electrician helpers can be involved in installing, maintaining, and upgrading electrical components in residential and commercial buildings that use less energy, thus making their impact on the environment less harmful.	High school diploma or equivalent No work experience Less than 1 month on-the-job training	\$36,180	\$36,720	<ul style="list-style-type: none"> <li>Measure materials or objects for installation or assembly.</li> <li>Cut metal components for installation.</li> <li>Test electrical equipment or systems to ensure proper functioning.</li> <li>Install electrical components, equipment, or systems.</li> <li>Inspect electrical or electronic systems for defects.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Residential Electrical Inspector</a></li> <li><a href="#">Electrical, Electronic, and Communications Engineering Technology/Technician</a></li> </ul>
<b>Construction Laborers</b> Bituminous Asphalt Technician, Construction Laborer, Construction Worker, Drop Crew Laborer, Equipment Operator (EO), Form Setter, Post Framer, Scaffolding Operator, Site Work Laborer, Toolman	Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris, and other waste materials.  <i>Construction laborers that work on LEED-certified buildings and other infrastructure enhancements that promote energy conservation, including using sustainable construction materials, are a key part of transitioning toward more sustainable building standards.</i>	No formal educational credential No work experience Less than 1 month on-the-job training*	\$37,710	\$44,130	<ul style="list-style-type: none"> <li>Operate pumps or compressors.</li> <li>Clean equipment or facilities.</li> <li>Maintain construction tools or equipment.</li> <li>Signal equipment operators to indicate proper equipment positioning.</li> <li>Position structural components.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Graduate Master Remodeler</a></li> <li><a href="#">Associate Constructor</a></li> <li><a href="#">Certified Concrete Surface Repair Technician</a></li> <li><a href="#">Heavy Highway Construction</a></li> <li><a href="#">Certification in Construction Materials Testing - Asphalt</a></li> </ul>
<b>Installation, Maintenance, and Repair Workers</b> Building Mechanic, Equipment Engineering Technician, Facilities Technician, Maintenance Engineer, Maintenance Journeyman, Maintenance Man, Maintenance Mechanic, Maintenance Specialist, Maintenance Technician, Maintenance Worker	Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of a building in repair. Duties may involve pipe fitting; HVAC maintenance; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs.  <i>People who work in the installation, maintenance, and/or repair of energy-efficiency equipment can specialize in a wide range of areas that help users conserve energy, motors, compressed air, pumps, boilers, steam systems, and many others.</i>	High school diploma or equivalent No work experience 1 to 12 months on-the-job training	\$43,890	\$45,380	<ul style="list-style-type: none"> <li>Replace worn, damaged, or defective mechanical parts.</li> <li>Inspect mechanical components of vehicles to identify problems.</li> <li>Inspect mechanical equipment to locate damage, defects, or wear.</li> <li>Test mechanical equipment to ensure proper functioning.</li> <li>Adjust equipment to ensure optimal performance.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Building/Property Maintenance</a></li> <li><a href="#">Specific installation certificates</a></li> </ul>
<b>Automotive Service Technicians and Mechanics</b> Automobile Mechanic, Automotive Drivability Technician, Automotive Mechanic, Automotive Service Technician, Heavy Line Technician, Lube Technician, Master Automotive Technician, Mechanic, Quick Service Technician, Service Technician	Electric vehicles are anticipated to become increasingly popular as policies make ownership more accessible and as technology improves and becomes more affordable. Service technicians and mechanics can diagnose, adjust, repair, or overhaul energy-efficient automotive vehicles like EVs.	Postsecondary certificate No work experience Less than 1 month on-the-job training	\$47,530	\$47,990	<ul style="list-style-type: none"> <li>Operate transportation equipment to demonstrate function or malfunction.</li> <li>Inspect vehicles to determine overall condition.</li> <li>Record information about parts, materials or repair procedures.</li> <li>Test mechanical systems to ensure proper functioning.</li> <li>Adjust equipment to ensure optimal performance.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Alternative Fuel Vehicle Technology/Technician</a></li> <li><a href="#">Automobile/Automotive Mechanics Technology/Technician</a></li> <li><a href="#">High Performance and Custom Engine Technician/Mechanic</a></li> <li><a href="#">Medium/Heavy Vehicle and Truck Technology/Technician</a></li> <li><a href="#">Vehicle Emissions Inspection and Maintenance Technology/Technician</a></li> <li><a href="#">Vehicle Maintenance and Repair Technology/Technician, General</a></li> </ul>
<b>Heating, Air Conditioning, and Refrigeration Mechanics and Installers</b> A/C Tech, HVAC Installer, HVAC Mechanic, HVAC Specialist, Refrigeration Mechanic, Refrigeration Operator, Refrigeration Technician, Service Technician, Systems Mechanic, Refrigeration Technician	Install or repair heating, central air conditioning, HVAC, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.  <i>People who work in the installation, maintenance, and/or repair of energy-efficient ventilation, and air conditioning (HVAC) systems can help people lower their energy bills while decreasing greenhouse gas emissions.</i>	Postsecondary certificate No work experience More than 1 year on-the-job training	\$52,310	\$54,690	<ul style="list-style-type: none"> <li>Test electrical circuits or components for proper functioning.</li> <li>Service heating, ventilation or air-conditioning (HVAC) systems or components.</li> <li>Replace worn, damaged, or defective mechanical parts.</li> <li>Repair worn, damaged, or defective mechanical parts.</li> <li>Confer with customers or users to assess problems.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician</a></li> <li><a href="#">Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/Technician</a></li> </ul>
<b>Industrial Machinery Mechanics</b> Industrial Machinery Mechanic, Industrial Mechanic, Loom Fixer, Loom Technician, Machine Adjuster, Machine Mechanic, Maintenance Technician, Mechanic, Overhauler, Sewing Machine Mechanic	Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems. May also install, dismantle, or move machinery and heavy equipment according to plans.  <i>Mechanics that operate, repair, and optimize energy-efficient equipment in industrial settings like factories, small manufacturing plants, or even energy-generating plants, are key in ensuring that supply and distribution systems are less resource-intensive and more efficient over time.</i>	High school diploma or equivalent No work experience More than 1 year on-the-job training	\$57,580	\$58,780	<ul style="list-style-type: none"> <li>Maintain work equipment or machinery.</li> <li>Repair worn, damaged, or defective mechanical parts.</li> <li>Replace worn, damaged, or defective mechanical parts.</li> <li>Lubricate equipment to allow proper functioning.</li> <li>Clean equipment, parts, or tools to repair or maintain them in good working order.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Energy Systems Installation and Repair Technology/Technician</a></li> <li><a href="#">Geothermal Energy System Installation and Repair Technology/Technician</a></li> <li><a href="#">Hydroelectric Energy System Installation and Repair Technology/Technician</a></li> <li><a href="#">Industrial Mechanics and Maintenance Technology/Technician</a></li> </ul>
<b>Construction and Building Inspectors</b> Building Inspection Engineer, Building Inspector, Building Official, Code Enforcement Officer, Combination Building Inspector, Construction Inspector, Elevator Inspector, Home Inspector, Plumbing Inspector, Public Works Inspector	Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.  <i>As energy costs continue to rise, businesses, building owners, and consumers are increasingly focusing on energy efficiency. This means that workers will need to be familiar with new technologies and methods for reducing energy consumption.</i>	High school diploma or equivalent 5 years or more work experience 1 to 12 months on-the-job training	\$59,950	\$68,480	<ul style="list-style-type: none"> <li>Monitor construction operations.</li> <li>Authorize construction activities.</li> <li>Evaluate construction projects to determine compliance with external standards or regulations.</li> <li>Inspect work sites to identify potential environmental or safety hazards.</li> <li>Test electrical equipment or systems to ensure proper functioning.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Building/Home/Construction Inspection/Inspector</a></li> </ul>
<b>Construction Managers</b> Concrete Foreman, Construction Area Manager, Construction Foreman, Construction Manager, Construction Services Manager, Construction Superintendent, Job Superintendent	Plan, direct, or coordinate, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. Includes managers in specialized construction fields, such as carpentry or plumbing.  <i>Construction managers that work on LEED-certified buildings and other infrastructure enhancements that promote energy conservation, including using sustainable construction materials, are a key part of transitioning toward more sustainable building standards. They typically have a deeper knowledge of sustainable construction systems and supply chains, which they are able to integrate into every step of the construction process.</i>	Bachelor's degree No work experience 1 to 12 months on-the-job training	\$100,220	\$108,210	<ul style="list-style-type: none"> <li>Manage construction activities.</li> <li>Develop operating strategies, plans, or procedures.</li> <li>Prepare financial documents, reports, or budgets.</li> <li>Communicate organizational policies and procedures.</li> <li>Communicate organizational information to customers or other stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Business Administration and Management, General</a></li> <li><a href="#">Business/Commerce, General</a></li> <li><a href="#">Construction Engineering Technology/Technician</a></li> <li><a href="#">Construction Management, General</a></li> <li><a href="#">Construction Management, Other</a></li> <li><a href="#">Construction Project Management</a></li> <li><a href="#">Operations Management and Supervision</a></li> <li><a href="#">Public Works Management</a></li> </ul>



Images 3 & 4. Construction managers direct the construction of energy-efficient infrastructure and equipment from early concept to facility completion. They supervise a diverse workforce, ensure compliance with all laws and safety requirements, and ensure the effectiveness of services and processes (Sources: U.S. DOE and U.S. BLS)

## RESOURCES TO LEARN MORE

- Explore occupation profiles including information on salaries, required qualifications, training opportunities, and much more on the [Career One Stop](#) website and [O\\*NET Online](#) website. Career One Stop also presents a summary of other common renewable energy generation jobs, their respective education and training requirements, and any opportunities for training within your community. You can also click around the Certification Finder to explore certification programs and resources that will help you boost your qualifications for an energy efficiency job.
- Learn about apprenticeships and other pathways for energy efficiency careers on [Apprenticeship.gov](#), including guidance on where to find and how to access these opportunities.
- Learn about the energy policies which are contributing to clean job growth in Atlanta:
  - [Plan A: City of Atlanta Comprehensive Development Plan](#)
  - [Atlanta Downtown Sustainability Action Plan](#)
  - [Clean Energy Atlanta 2019](#)

*This factsheet is part of a collaborative effort between Smart Growth America (SGA) and the Partnership for Southern Equity (PSE) to support Atlanta's current and future workers' participation in the growing clean economy. The factsheets include introductory information on jobs within the following clean economy sectors: (1) energy efficiency, (2) solar energy, and (3) green infrastructure.*