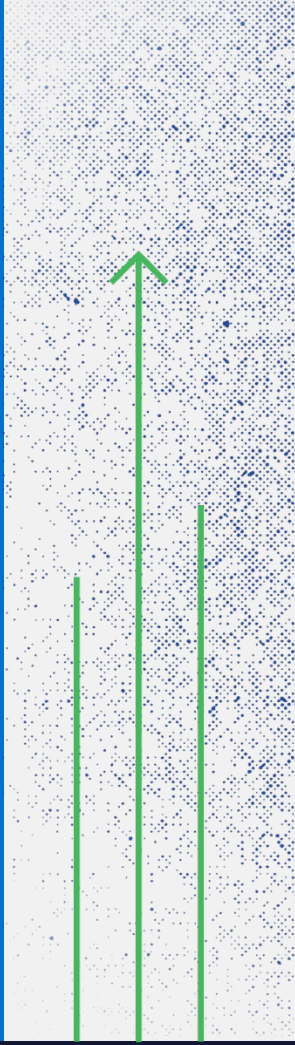


# WEATHERIZATION CAREER GUIDE



Exploring Careers in  
Weatherization and Other Fields

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## Introduction

### A Growing Industry

Green jobs are essential to mitigating the effects of and building resilience to climate change — and they're growing rapidly. Recent trends indicate continued rapid expansion in the green job market, promising an array of exciting and well-paid career paths and opportunities for the next generation of workers.

This sector offers diverse opportunities for individuals of equally diverse and unique backgrounds, including those with high school diplomas or GEDs, various training pathways such as apprenticeships, as well as those with higher education backgrounds such as associate's and bachelor's degrees.

This content is provided for educational purposes only and does not constitute an endorsement of any specific programs, companies, products, or services.

### How to Use this Guide

This guide is meant to introduce you to and help you explore careers in weatherization and other related fields. It is not an exhaustive list of information on these careers and should be treated as a starting point for your own further exploration and research.

Nontraditional jobs are those where one gender makes up 25% or less of the total workforce in that occupation (Pub. L. 102-530, 29 U.S.C. 2501 et seq.). In the trades, this has historically been an underrepresentation of women. Look for this symbol (†) after the job title, which indicates a nontraditional job for women. And look for this symbol (‡) after the job title, which indicates a nontraditional job for men. For more information, see the Pennsylvania Department of Education's [article on Nontraditional Programs](#).

# Weatherization Careers

## Introduction

The weatherization industry is a win-win for workers and their communities, providing well-paying career opportunities and helping residents cut energy costs, while making their homes healthier and safer. Weatherization work includes insulation and ventilation, duct sealing, heating system repairs or replacements, and much more. It's part of the larger energy efficiency industry, which lowers energy use through advancements in technology, the use of more efficient appliances, the construction of energy-saving buildings, and the optimization of energy systems.

There are many specialists involved in weatherizing homes, including Energy Auditors, Weatherization Technicians, Crew Leaders, and Quality Control Inspectors. Professionals in the weatherization industry are in strong demand, with much opportunity for growth and advancement in their careers.

Through the Weatherization Assistance Program, roughly 550,000 homes in Pennsylvania have been weatherized over the last 45+ years. Fueled by recent legislation, federal incentives, and a rising consumer demand, the weatherization industry in Pennsylvania is growing rapidly. O\*NET OnLine, a service run by the U.S. Department of Labor, projects an employee growth rate of [approximately 8%](#) for the state between 2022 and 2032 - four times the national average!

Interested in careers in weatherization, building performance, and energy efficiency? See IREC's [Green Buildings Career Map](#) for example career paths, certification and education requirements, salary information, and more on 55 different positions within the field!

## Myth-Busting

Here are six common myths about working in the weatherization industry:

1. **Myth:** Weatherization jobs are low-paying.

**Fact:** Weatherization jobs often offer competitive salaries and benefits, especially as the demand for the industry continues to grow. Room for advancement leads to increasing wages as you progress through your career.

2. **Myth:** Weatherization work is only temporary.

**Fact:** The U.S. Department of Energy established the Weatherization Assistance Program in 1976! Weatherization work has been in high demand in the United States for over 48 years and counting. The demand for weatherization is ongoing (and increasing) due to the continuous need for energy efficiency improvements and the growing focus on sustainable practices, leading to long-term job opportunities.

3. **Myth:** Weatherization jobs are not skilled work.

**Fact:** The weatherization industry consists of a range of skilled positions that require training and certification, including energy audits, HVAC system upgrades, and related administrative work.

4. **Myth:** There are limited career advancement opportunities in weatherization.

**Fact:** The weatherization industry offers numerous pathways for career advancement, including roles in project management, specialized technical positions, crew leader positions and more. Many companies invest in their employees, offering professional development opportunities to further your education and/or training, so you learn while you earn!

5. **Myth:** Weatherization is only relevant in colder climates.

**Fact:** Weatherization is important in all climates as it improves energy efficiency, reduces utility costs, and enhances indoor comfort regardless of regional temperatures.

6. **Myth:** Only men work in weatherization.

**Fact:** The weatherization industry is diverse and inclusive, with opportunities for all genders. Many organizations actively promote diversity and encourage women to enter the field.

## Weatherization Technician (†)

*Also known as: Retrofit Installer*

- Evaluate properties to identify energy efficiency opportunities and install various weatherization measures (retrofits) to optimize energy usage and comfort
  - Conduct blower door air testing for building shell tightness
  - Perform caulking, weatherstripping, and window/door replacement
  - Implement pipe wrap, window repairs, and drywall repairs as needed
  - Install insulation on ductwork, roofs, and in attics/basements
  - Upgrade thermostats and lighting to enhance energy efficiency
- Perform health and safety testing pre- and post-retrofits

### Qualifications

- High school diploma or equivalent
- Highly recommended:
  - Completion of weatherization training programs such as the [Home Energy Professional Certification at Pennsylvania College of Technology's Clean Energy Center](#)
  - [Building Performance Institute \(BPI\) Building Science Principles Certificate of Knowledge](#)
  - [BPI Building Analyst-Technician Certificate](#)

### Wages & Outlook

- Average wages in PA (as of [2023](#)): \$25.01/hr, \$52,030/yr
- Projected job growth ([2022-2032](#)): 2-4%, ~3000 positions

### Career Pathways

From Weatherization Technician, you can advance to roles such as:

- [Weatherization Crew Leader](#)
- [Sales Representative](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Weatherization Crew Leader (†)

*Also known as: Building Analyst Technician*

- Oversee home energy retrofit and upgrade projects from start to finish, with direct oversight for crew members, materials, diagnostic testing procedures, managing installation quality, and worksite safety
- Review job proposals, establish work plans, assign crews, and manage necessary equipment, tools, and materials

### Qualifications

- High school diploma or equivalent
- At least 3-5 years of job experience, preferably as a Weatherization Technician
- Highly recommended:
  - [OSHA 30 Certificate](#)
  - [BPI Building Science Principles Certificate of Knowledge](#)
  - [BPI Site Supervisor Certificate](#)
  - [BPI Home Energy Professional Crew Leader Certificate](#)

### Wages & Outlook

- Average wages in PA (as of [May 23, 2024](#)): \$21/hr, \$44,367/yr

### Career Pathways

From Crew Leader, you can advance to roles such as:

- [Residential Energy Auditor](#)
- [Sales Representative](#)
- [Quality Control Inspector](#)
- [Weatherization Manager](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Residential Energy Auditor (†)

*Also known as: Building Analyst Professional*

- Inspect, test, and evaluate residential buildings to determine energy efficiency needs, conduct various safety tests, and to install direct measures
- Find areas of air leakage, troubleshoot technical problems, and advise customers on recommended solutions and related energy education
- Identify, communicate, and document health and/or safety concerns such as gas leaks, carbon monoxide, mold, and asbestos

### Qualifications

- High school diploma or equivalent
- Highly recommended:
  - [BPI Building Analyst-Technician Certificate](#)
  - [BPI Energy Auditor Certificate](#)
  - [AEE Certified Energy Auditor](#)
  - [RESNET HERS Certified Rater](#)

### Wages & Outlook

- Entry-level wages in PA ([2022](#)): \$45,150
- Average wages in PA ([2022](#)): \$64,780
- Experienced-level wages in PA ([2022](#)): \$74,450
- Projected job growth ([2020-2030](#)): +2%, ~140 positions

### Career Pathways

From Residential Energy Auditor, you can advance to roles such as:

- [Building Performance Specialist](#)
- [Quality Control Inspector](#)
- [Energy Manager](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).



## Quality Control Inspector (†)

- Verify compliance of home energy retrofit projects according to work plans, standards, and government regulations
- Ensure projects implemented according to plan, using their extensive knowledge of building science and regulatory standards

### Qualifications

- High school diploma or equivalent
- At least 3-5 years of job experience
- Highly Recommended:
  - [OSHA 10 Certificate](#)
  - [BPI Home Energy Professional Quality Control Inspector Certificate](#)
  - [BPI Building Science Principles Certificate of Knowledge](#)
  - [BPI Building Analyst Technician Certificate](#)
  - [BPI Building Analyst Professional Certificate](#)

### Wages

- Average wages in PA (as of [May 23, 2024](#)): \$22/hr, \$44,775/yr

### Career Pathways

From Quality Control Inspector, you can advance to roles such as:

- [Energy Manager](#)
- [Building Performance Specialist](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Building Performance Specialist (†)

*Also known as: Building Performance Diagnostician, Building Performance Consultant, Green Building Consultant, Sustainable Building Consultant, Environmental Building Consultant, Green Design Consultant*

- Evaluate buildings for environmental impact, energy efficiency, and sustainability compliance
- Advise on sustainable design practices, energy-efficient systems, environmentally friendly materials, and renewable energy transition
- Collaborate with stakeholders, provide education, and monitor performance to ensure adherence to green building standards and goals

### Qualifications

- Bachelor's degree or higher in Architecture, Environmental Science, Environmental Engineering, Sustainability Studies, or related field
- Highly recommended: [U.S. Green Building Council Leader in Energy & Environmental Design \(LEED\) Green Associate Certificate](#)

### Wages

- Average wages in PA (as of [May 21, 2024](#)): \$98,908/yr

### Career Pathways

From Building Performance Specialist, you can advance to roles such as:

- [Energy Manager](#)
- [Building Scientist](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Sales Representative

- Generate sales through direct interaction with customers; understand their needs and make recommendations towards weatherization and/or energy efficiency measures
- Present technical and financial information to potential customers, vendors, contractors, and dealers

### Qualifications

- Highly Recommended: [BPI Building Science Principles Certificate of Knowledge](#)

### Wages & Outlook

The following information pertains to Sales Representatives in general, beyond the specific context of weatherization.

- Average wages in PA (as of [2023](#)): \$29.80/hr, \$61,980/yr
- Projected job growth ([2022-2032](#)): 2-4%, ~110,600 positions

### Career Pathways

From Sales Representative, you can advance to roles such as:

- [Program Manager](#) (also known as Program Coordinator)
- [Office Administrator](#) (also known as an Administrative Assistant)
- [Customer Service Representative](#)
- [Financial Manager](#)
- [Human Resources Manager](#) (‡)
- [Marketing & Outreach Specialist](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Weatherization Manager (†)

*Also known as: Project Manager, Director of Weatherization Services, Weatherization Program Administrator*

- Oversee and manage the implementation of weatherization and/or energy efficiency retrofit projects
- Develop project plans, scopes of work, timelines, and budgets for weatherization and/or energy efficiency retrofit projects, ensuring successful implementation within those constraints
- Collaborate with energy professionals such as energy assessors, technicians, and engineers to analyze energy needs and recommend appropriate retrofit measures

### Qualifications

- High school diploma or equivalent
- At least 5 years of job experience
- Highly Recommended: Associate's degree or higher in Engineering, Architecture, Construction Management, or related

### Wages & Outlook

The following information pertains to Project Managers in general, beyond the specific context of weatherization.

- Average wages in PA (as of [2023](#)): \$46.32/hr, \$96,350/yr
- Projected job growth ([2022-2032](#)): 5-8%, ~68,100 positions

### Career Pathways

From Project Manager, you can advance to roles such as:

- [Program Manager](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Energy Manager (†)

- Evaluate and manage energy use in buildings or building complexes such as hospitals, hotels, schools, and apartments
- Determine and implement best methods to optimize building performance and reduce energy usage across a company's buildings and business practices
- Responsible for the operation and maintenance of all energy and utility systems

### Qualifications

- Bachelor's degree or higher in Environmental Science, Environmental Engineering, Mechanical Engineering, Electrical Engineering, or related
- At least 3-5 years of job experience

### Wages

- Average wages in PA (as of [May 28, 2024](#)): \$44/hr, \$92,516/yr

### Career Pathways

From Energy Manager, you can advance to roles such as:

- [Energy Engineer](#)
- [Building Scientist](#)

For more information on this position, please visit its listing in IREC's [Green Buildings Career Map](#).

## Building Energy Code Official (†)

*Also known as: Building Energy Code Inspector, Residential Building Inspector, Energy Code Inspector*

- Ensure compliance with local, state, and federal energy codes and regulations in the construction and renovation of buildings
- Review construction plans and conduct on-site inspections of buildings during and after construction to verify that energy systems (e.g., insulation, HVAC, lighting, windows) meet code requirements
- Interpret and enforce energy codes, including issuing notices of violation and ensuring corrective actions are taken within specified timelines

### Qualifications

- At least 5 years of experience in residential building or design of buildings that are under the 2018 IRC
- [ICC Residential Building certification, Residential Energy certification, and Residential Mechanical certification](#)
- Highly recommended: Training in blower door tests, HVAC duct pressure tests, and insulation

### Wages

- Average wages in PA (as of [August 12, 2024](#)): \$28/hr, \$58,248/yr

### Career Pathways

From Building Energy Code Official, you can advance to roles such as:

- [Energy Engineer](#)
- [Building Scientist](#)

For more information on this position, please visit this [article by the International Code Council](#).

## Other Energy & Retrofit Careers

### Wind Turbine Technician\*

*\*Nontraditional employment data not available*

- Install, inspect, maintain, and repair wind turbines to ensure optimal performance
- Test and troubleshoot electrical, mechanical, and hydraulic components and system in the turbine
- Collect turbine data for testing or research and analysis

#### Qualifications

- High school diploma or equivalent
- Highly recommended:
  - Associate's degree or higher in Wind Energy, Mechanical or Electrical Engineering, or related

#### Wages & Outlook

- Average wages in PA (as of [2023](#)): \$38.91/hr, \$80,940/yr
- Projected job growth ([2022-2032](#)): >9%, ~1800 positions

#### Career Pathways

From Wind Turbine Technician, you can advance to roles such as:

- [Lead Wind Technician](#)
- [Wind Energy Project Manager](#)
- [Wind Farm Operations Manager](#)

## Solar Photovoltaic Installer\*

*\*Nontraditional employment data not available*

- Install, inspect, and maintain photovoltaic solar panel systems on residential and commercial structures in accordance with codes and standards
- Assemble solar modules, panels, or support structures, as specified
- Plan solar panel configurations based on customer electrical needs and site characteristics

### Qualifications

- High school diploma or equivalent
- [Current registration with the Bureau of Consumer Protection](#)
- Highly Recommended: Completion of a solar certification program through the [North American Board of Certified Energy Professionals](#)

### Wages & Outlook

- Average wages in PA (as of [2023](#)): \$24.60/hr, \$51,170/yr
- Projected job growth ([2022-2032](#)): >9%, ~3500 positions

### Career Pathways

From Solar Photovoltaic Installer, you can advance to roles such as:

- [Solar Site Supervisor](#)
- [Electrician with Solar Expertise](#)

For more information on this position, please visit its listing in IREC's [Solar Career Map](#).

Interested in solar careers? See IREC's [Solar Career Map](#) for example career paths, certification and education requirements, salary information, and more on 44 different positions in the field!



## HVAC Technician (†)

- Install heating, ventilation, and air conditioning systems, including duct work, piping, and electrical wiring installation
- Perform complex and routine inspections, diagnose problems, and provide maintenance and repairs to improve system efficiency and performance

### Qualifications

- High school diploma or equivalent
- Highly recommended:
  - Apprenticeship experience and/or relevant vocational coursework
  - [OSHA 10 or 30 Certificate](#)
  - [BPI Infiltration and Duct Leakage Certificate](#)

### Wages & Outlook

- Average wages in PA (as of [2023](#)): \$28.00/hr, \$58,240/yr
- Projected job growth ([2022-2032](#)): 5-8%, ~37,700 positions

### Career Pathways

From HVAC Technician, you can advance to roles such as:

- [Service Manager](#)
- [Sales & Marketing Associate](#)

For more information on this position, please visit its listing in IREC's [Careers in Climate Control Technology Map](#).

Interested in HVAC-related careers? See IREC's [Careers in Climate Control Technology Map](#) for example career paths, certification and education requirements, salary information, and more on 40 different positions in the field!

## Architect

- Collaborate with clients to understand their needs and preferences, developing architectural designs that meet functional requirements and regulatory standards
- Create detailed plans, sketches, and 3D models to visualize design concepts, optimizing functionality and user experience while ensuring compliance with building codes
- Oversee project execution from conception to completion, coordinating with consultants, contractors, and vendors to ensure timely delivery, quality craftsmanship, and adherence to budgetary constraints

## Qualifications

- Bachelor's or Master's Degree in Architecture
- Complete the Intern Development Program (IDP) or the [Architectural Experience Program \(AXP\)](#)
- Pass the [Architect Registration Examination \(ARE\)](#)
- Licensure through the [Pennsylvania State Architects Licensure Board](#)

## Wages & Outlook

- Average wages in PA (as of [2023](#)): \$41.08/hr, \$85,450/yr
- Projected job growth ([2022-2032](#)): 5-8%, ~8,200 positions

## More Jobs to Explore...

- Construction
  - [Carpenter \(†\)](#)
  - [Masonry Technician \(†\)](#)
- Renewable Energy
  - [Solar Hot Water Plumbing Technician \(†\)](#)
  - [Geothermal Technician](#) \*Nontraditional employment data not available
  - [Renewable Energy Research Scientist](#)
- Energy Efficiency & Home Performance
  - [Heat Pump Technician \(†\)](#)
  - [EV Mechanic/Technician](#) \*Nontraditional employment data not available
- Design & Management
  - [Occupational Health & Safety Specialist \(†\)](#)
  - [Environmental Scientist](#) \*Nontraditional employment data not available
  - [Environmental Engineer](#) \*Nontraditional employment data not available
  - [Sustainability Manager](#) \*Nontraditional employment data not available
  - [City Planner](#) (also known as Urban or Regional Planners) \*Nontraditional employment data not available
  - [Natural Resource Manager](#) \*Nontraditional employment data not available
- Ancillary Roles
  - [Program Manager](#) (also known as Program Coordinator)
  - [Office Administrator](#) (also known as an Administrative Assistant)
  - [Customer Service Representative](#)
  - [Financial Manager](#)
  - [Human Resources Manager \(‡\)](#)
  - [Marketing & Outreach Specialist](#)
- Other
  - [Environmental Educator](#)
  - [Landscape Manager](#) \*Nontraditional employment data not available

## Your Next Steps

### 1. Career Exploration

- Do further research on the job positions that piqued your interest. This may include using the further resources listed below.
- Meet with your school's career counselor, who is there to aid in your career exploration journey. They can help you narrow down options and guide you to relevant training, certification, and education programs as necessary to achieve your dream career.
- Speak with your school's work-based learning coordinator (also known as a cooperative education coordinator) to get involved with employers while you're still in school. Experiences such as job-shadowing, internships, and cooperative education programs can earn you training in the career of your choice before you graduate, while earning you school credit!

### 2. Relevant Training, Certifications, and Licensing

- Determine what training, certifications, and licenses you need for the position you are aiming to apply for. Use this guide to help you, speak with your school's career counselor, and if possible, speak to someone in the industry.
- Research apprenticeship programs, postsecondary educational programs and certifications through community colleges, colleges and universities, and training providers.
- If appropriate, find scholarships to support furthering your education and training needs.

### 3. Connecting with Employers & Looking for Opportunities

Once you are workforce ready, it's time to look for employment opportunities!

- Attend career fairs & local networking events to learn more about your local companies and their open positions
- By speaking with your local relevant union
- Use online job boards and recruiting sites such as [Green Workforce Connect](#), [LinkedIn](#), [Indeed](#), [ZipRecruiter](#)

## Additional Resources

- IREC's [Green Buildings Career Map](#)
- IREC's [Solar Career Map](#)
- IREC's [Careers in Climate Control Technology Map](#)
- Still not sure which job is right for you? Take Get Into Energy's [Green Energy Career Quiz](#)