



Guidelines for Home Energy Professionals Project



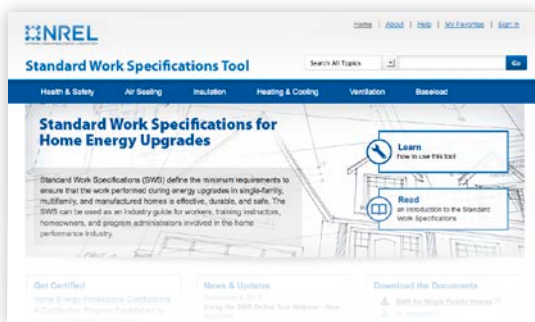
About the Project

The Guidelines for Home Energy Professionals is a collaboration between the U.S. Department of Energy (DOE) and a wide range of home energy performance industry professionals. The Guidelines project, managed by the National Renewable Energy Laboratory (NREL) for DOE, addresses the need for a highly-skilled weatherization workforce equipped to complete consistent, high-quality home energy upgrades for single-family (SF) homes, multifamily (MF) homes, and manufactured housing (MH). In doing so, it helps increase energy efficiency, improve indoor air quality, increase comfort, and reduce energy costs in homes across America.



Define Quality Work: Standard Work Specifications (SWS) for Home Energy Upgrades

- **Defining Work as a First Step.** The first step in the Guidelines project was to develop Standard Work Specifications reflecting a whole-house approach to energy-efficiency installations.
- **Filling a Performance Void with SWS.** Prior to the SWS, there was no consistent resource that identified the expected outcomes for individual retrofit measures performed during an energy efficiency upgrade.
- **Drawing Upon Years of Experience.** The SWS synthesize more than 30 years of Weatherization Assistance Program (WAP) building science expertise within the WAP and the broader home performance industry. The SWS combine original content and relevant codes and standards to identify desired outcomes of quality home energy upgrades.
- **Engaging Hundreds of Industry Leaders.** The project engaged more than 400 subject matter experts including weatherization professionals, industry technical leaders, and other highly qualified individuals to develop the SWS. During this process, more than 2,000 public comments regarding the SWS were reviewed.
- **Providing an Industry Baseline.** The SWS serve as a universal resource for the home energy upgrade industry, giving residential contractors, utilities, homeowners, investors, and others a baseline for quality in residential energy upgrades.



The SWS are available via a dynamic online tool that makes work easier for the weatherization and home performance industry. SWS content is searchable (find the topics and specifications you need), interactive (save custom work plans that facilitate the development of scopes of work and quality control checklists) and accessible to third-party organizations via an Application Programming Interface (API).

Timeline of Key Milestones and Events

2009		2010							
October	December	June	July	August-September	September-October	September-November	November	November-January 2011	
Recovery through Retrofit Report Released	<ul style="list-style-type: none"> • Training and Technical Assistance Plan Completed • NREL Commissioned to Develop SWS, JTAs, and Certifications 	SWS SF Industry Meeting: 40 Participants	<ul style="list-style-type: none"> • JTA Focus Group Meetings • SWS SF Technical Review Committee Meeting in Golden, Colorado 	SWS SF Industry Technical Review: 156 Participants	SWS SF Federal Agency Review	JTA Validation Study Survey: 400 Energy Auditors, 150 Quality Control Inspectors, 115 Crew Leaders, and 100 Retrofit Installer Participants	SWS SF Federal Register Announcement	SWS SF Public Review: 300 participants; 1,200 Comments	



Define Quality Training: Job Task Analyses (JTAs) and Accreditation

- **Building a Foundation for Training Programs.** The Guidelines project convened industry leaders to develop home energy professional job task analyses that catalogue the knowledge, skills, and abilities that a worker needs to effectively perform a given job.
- **Created for the Four Most Common Jobs.** The JTAs for single-family home energy professionals reflect the four most common job classifications in DOE's WAP and the wider home energy upgrade industry: energy auditor, quality control inspector, crew leader, and retrofit installer/technician.
- **Identifying the Key Job Characteristics.** Focus group participants followed a formal process to identify key duty areas, job descriptions, knowledge, skills, and abilities, along with the necessary tools, safety items, and steps to complete a task.
- **JTAs Help Guide Coursework.** The JTAs allow training providers to develop coursework that can be verified and accredited by the Interstate Renewable Energy Council (IREC). IREC is a leading provider of training program accreditation and offers accreditation, based on the Home Energy Professional JTAs, to weatherization and home performance training programs through their Institute for Sustainable Power Quality (ISPQ) program.
- **JTAs Expanded for Multifamily Homes.** Realizing a similar need for the multifamily housing industry, professional JTAs also were developed for four job categories associated with Multifamily Home Energy Upgrades.



The fact that there is an online resource that includes very detailed work specifications, and to be able to just click and choose whichever ones we want to use and then include them in our handbook, is just phenomenal for us. This cut our workload considerably—maybe by more than half.



– Jaime Gomez, Coordinator for Austin Energy's Multifamily Rebate Program

2011						2012			
May	July	September	October–November	October–December	December–February 2012	January–February	February	March–May	April
<ul style="list-style-type: none"> • Crew Leader, Energy Auditor, and Quality Control Inspector JTA Technical Reports Published • Certification Scheme Committee Industry Meetings: 40 Participants • <i>Home Energy Professionals Policy and Procedural Handbook for ISO 17024 Compliance</i> published 	<ul style="list-style-type: none"> • SWS MF Technical Review Committee Meeting in Raleigh, North Carolina • BPI Joins Project to Develop and Administer Certifications 	<ul style="list-style-type: none"> • SWS MH Industry Meeting 		<ul style="list-style-type: none"> • SWS MF Industry Technical Review 	<ul style="list-style-type: none"> • SWS SF Building Code Review 	<ul style="list-style-type: none"> • SWS MF Public Review: 333 Comments 	<ul style="list-style-type: none"> • Certification Schemes Finalized with Certifying Body and Committees 	<ul style="list-style-type: none"> • SWS MH Public Review 	<ul style="list-style-type: none"> • Retrofit Installer JTA Technical Report Published • Certification Exam Test Writing Completed



Define Quality Workers: Home Energy Professional Certifications

- **Achieving Advanced Certifications.** The final component of the Guidelines project was to develop advanced certifications that meet American National Standards Institute (ANSI) accreditation under the ISO 17024 standard for personnel certification programs.
- **Providing a Benchmark for Experience.** Certification helps provide a benchmark for demonstrating experience in the home performance industry.
- **Basing Certification on SWS.** The Home Energy Professional Certifications are built on the industry-developed Standard Work Specifications for Home Energy Upgrades. This means that the industry has a logical and consistent connection between the expectations of the work and the skills required of the workforce.
- **DOE Backing Increases Support.** With DOE support, the Home Energy Professional Certifications communicate credibility and inspire consumer confidence.
- **BPI Takes Charge Overseeing Exams.** Through a competitive solicitation, the Building Performance Institute, Inc. (BPI) was licensed as the first certifying body to oversee exam development, and to deliver four ANSI-accredited certifications to the marketplace.
- **Boosting Certification with ANSI Accreditation.** The Home Energy Professional Certifications received ANSI accreditation in September 2013.
- **Adoption by the Industry.** DOE has required that all work performed with WAP funds be inspected by a certified Quality Control Inspector beginning in Program Year 2015.

					2013					
May-February 2013	May	June	July	October	March-April	April	May	August	September	October
Certification Pilot Testing: 1,179 total Certification Exams Taken	SWS SF Final Public Review: More than 15 Participants; 610 Comments	SWS MH Final Public Review: More than 9 Participants; 65 Comments		SWS MF Final Public Review: More than 9 Participants; 81 Comments	ANSI Accreditation Documentation Submitted		SWS Tool Phase II Launch: MH		ANSI Accreditation Achieved	Home Energy Professional Certifications Available Nationwide
			SWS MF Building Code Review			SWS Tool Phase I Launch: SF		SWS Tool Phase III Launch: MF • 4,690 Total Visitors		

Guidelines for Home Energy Professionals Project

The resources developed through the Guidelines project are aimed at creating a robust, effective, and quality-driven home energy upgrade industry.

Quality Work: Defined



Standard Work Specifications (SWS) for Home Energy Upgrades

Industry-defined guidelines that set uniform expectations for quality work

Use the SWS for energy audits, scopes of work, quality control efforts, and training

Visit sws.nrel.gov to access the Standard Work Specifications Tool

Quality Training: Defined



Accredited Training

Third-party verified coursework based on industry-developed Job Task Analyses (JTAs) that promote consistency and confidence

Train your workers to deliver the quality work defined in the SWS

Visit eere.energy.gov/wip/guidelines.html to learn more about Interstate Renewable Energy (IREC) training program accreditation

Quality Workers: Defined



Home Energy Professional Certifications

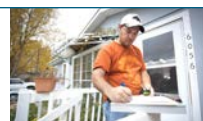
Competency-based certifications that raise the bar by proving worker has experience, education, and training

Certify your workers to increase profits and reduce costs by delivering quality work by competent workers

Visit bpi.org to get certified as a Home Energy Professional—Certifications available for Retrofit Installer Technician, Crew Leader, Energy Audit, Quality Control Inspector

Standardized residential energy upgrade industry and a skilled and credentialed workforce

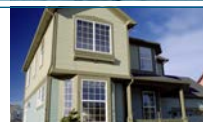
Employers and Contractors: Find, hire, and retain committed and competent employees. Reduce callbacks and overall liability.



Home Energy Workers: Enjoy increased flexibility and distinction, and find work with employers that value nationally recognized, transferrable Home Energy Professional Certifications.



Homeowners and Consumers: Experience increased confidence and satisfaction, knowing that your home energy upgrade team is certified and delivering quality work as defined through standard work specifications.



Training Centers: Streamline weatherization training curricula and course materials using industry-defined JTAs.



Utilities and Efficiency Program Administrators: Cut program costs, improve service delivery, reduce callbacks and installation errors, and lessen liability by delivering quality work from an improved workforce.



About the DOE Weatherization Assistance Program

During the past 33 years, the Department of Energy's Weatherization Assistance Program (WAP) has provided weatherization services to more than 6.4 million low-income households. Families receiving weatherization services see their annual energy bills reduced, along with improved comfort, health, and safety. Because the energy improvements that make up weatherization services are long lived, the savings add up over time to generate substantial benefits to weatherization recipients, their communities, and the nation as a whole. The WAP represents the single largest energy efficiency retrofit workforce in the nation. Its decades of experience and leadership make it the ideal organization to develop technical tools and resources to benefit the entire industry.

Guidelines Project Partnering Organizations

The following organizations contributed to the Guidelines for Home Energy Professionals project:

- Advanced Energy
- Association for Energy Affordability
- Building Performance Institute
- Interstate Renewable Energy Council
- Nahan Communications
- National Renewable Energy Laboratory
- Pacific Northwest National Laboratory
- Professional Testing, Inc.
- U.S. Department of Energy Building Technologies Office
- U.S. Department of Energy Weatherization and Intergovernmental Program

Additional Resources

SWS Online Tool: <https://sws.nrel.gov/>

Single-Family JTAs:

- Retrofit Installer/Technician: www.wip.energy.gov/pdfs/retrofit_installer_jta_04112012.pdf
- Crew Leader: www.wip.energy.gov/pdfs/51673.pdf
- Energy Auditor: www.wip.energy.gov/pdfs/51672.pdf
- Quality Control Inspector: www.wip.energy.gov/pdfs/51670.pdf

Multifamily JTAs:

- Retrofit Project Manager: www.nrel.gov/docs/fy14osti/60446.pdf
- Energy Auditor: www.nrel.gov/docs/fy14osti/60447.pdf
- Building Operator: www.nrel.gov/docs/fy14osti/60536.pdf
- Quality Control Inspector: www.nrel.gov/docs/fy14osti/60537.pdf

WIP Website: www.wip.energy.gov

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