

## WEATHERIZATION ASSISTANCE PROGRAM

## **EXECUTIVE SUMMARY**

#### Mission

The U.S. Department of Energy's (DOE) <u>Weatherization Assistance Program</u> (WAP or Program) reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety.

**WAP has operated for over 45 years** and is the nation's largest single "whole house" energy efficiency program. Its primary purpose, established by <u>law</u>, is:

"...to increase the energy efficiency of dwellings owned or occupied by low-income persons, reduce their total residential energy expenditures, and improve their health and safety, especially low-income persons who are particularly vulnerable such as the elderly, the disabled, and children."

DOE awards formula grants to all 50 states, the District of Columbia, five U.S. territories and Native American Tribes, which then contracts with local weatherization providers to implement the Program. Nearly 700 local providers deliver WAP services to an average of 35,000 homes annually using DOE congressionally appropriated funds. WAP creates a more comfortable and livable home while reducing annual energy costs by an average of **\$372 or more**<sup>1</sup>.

For every **\$1** invested by DOE, the Program leverages **\$3.04**<sup>2</sup> in other federal and non-federal resources. Local organizations use leveraged resources to weatherize more low-income homes and to deliver more services while weatherizing homes.

## The Need for Weatherization Services

More than **39.5 million households**<sup>3</sup> are eligible for WAP services, though not all are appropriate candidates for the program. Some income eligible clients may live in dwellings that require repairs, rehabilitation, or services that are beyond the scope of WAP. New funding through the Weatherization Readiness Fund (WRF) authorized in Fiscal Year (FY) 2022 is helping to remove these barriers for some.

Any household at or below 200% of the <u>poverty guidelines</u> is considered eligible. WAP Grantees may also use the <u>U.S. Department of Health and Human Services</u> <u>Low-Income Home Energy Assistance Program (HHS LIHEAP)</u> criteria of 60% of state-median income.



<sup>&</sup>lt;sup>1</sup> Expressed in 2022 dollars. Tonn, B., D. Carroll, S. Pigg, M. Blasnik, G. Dalhoff, J. Berger, E. Rose, B. Hawkins, J. Eisenberg, F. Uncar, I. Bensch, and C. Cowan. 2014. Weatherization Works – Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program. Oak Ridge National Laboratory, ORNL/TM-2014/338.

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> Ibid.

Low-income households typically spend **14%** of their total annual income on energy, compared to **3.0%**<sup>4</sup> for other households and are often on fixed incomes or rely on income assistance programs and are vulnerable to volatile changes in the economy or energy markets. High energy users or households with a high energy burden also receive priority for weatherization services.

**Figure 1**<sup>5</sup> depicts the percentage of U.S. households that experienced energy insecurity, detailed further by various ways that this occurred, such as having reduced or forewent necessities to pay energy bills, having received disconnection notices, and/ or having kept homes at unhealthy temperatures. Across all measures, U.S. household energy insecurity declined from 2015 to 2020, however, more than one-quarter of Americans reported they faced energy insecurity in 2020. This data further exemplifies the need for weatherization, since these services can help reduce the costs of energy and improve health outcomes for a great number of Americans, and additionally, reduce the national energy burden.

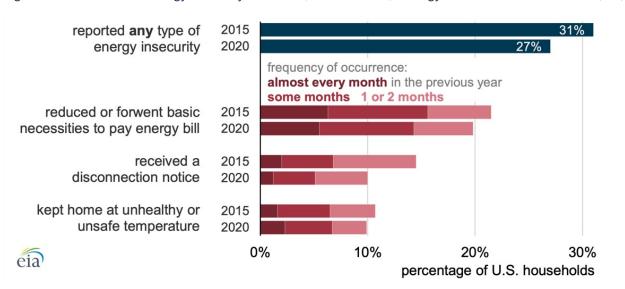


Figure 1 | U.S. Household Energy Insecurity Measures (2015 and 2020) | Energy Information Administration (EIA)

<sup>&</sup>lt;sup>4</sup> Rose, E., B. Hawkins. 2020. "<u>Background Data and Statistics on Low-Income Energy Use and Burden for the Weatherization Assistance Program: Update for Fiscal Year 2020."</u>

<sup>&</sup>lt;sup>5</sup> EIA, Residential Energy Consumption Survey (RECS). April 11, 2022. "In 2020, 27% of U.S. Households had difficulty meeting their energy needs."

## Client Eligibility

DOE WAP stakeholders (Grantees, Subgrantees, Weatherization Training Centers, and advocates) voiced their need for a simpler, streamlined process for the intake of qualifying households. Expanding DOE's income eligibility to categorically include <u>U.S. Department of Housing and Urban Development (HUD)</u> means-tested programs will better facilitate referral services for low-income households, reducing the burden on both the intake agencies and households in need of services.

WAP Grantees and Subgrantees may certify applicants that meet the income requirements of HUD means-tested programs of 80% Area Median Income through mechanisms including, but not limited to: applicant documentation, interagency recipient lists, shared system databases, etc. Method of verification of eligibility must be included in the client file. The beneficiaries of this change include:

- 1. DOE WAP Grantees and Subgrantees, by allowing households qualified through means-tested HUD Programs, to be categorically eligible for WAP.
- 2. Eligible households are served by removing the burden of applying for and submitting the same documentation to multiple programs to receive comprehensive services.

## Household and Community Impacts

WAP alleviates the heavy energy burden on low-income households and helps them become self-sufficient. WAP measures:

- Result in an average energy savings of \$372 per year<sup>6</sup> per weatherized household.
   Savings can be higher if electric baseload measures (e.g., lighting, refrigerators) are upgraded.
- Are "locked" into the home and continue to save money and energy every year.
- Improve health and safety by eliminating energy-related hazards and by enhancing the air quality of the home.

The Weatherization Assistance Program helps low-income households while contributing to revitalizing communities by spurring economic growth and reducing environmental impacts.

DOE WAP returns **\$2.78** in non-energy benefits for every **\$1.00** invested in the Program<sup>7</sup>. After WAP services, families' homes are more livable, resulting in fewer missed days of work (i.e., sick days, doctor visits) and a decrease in out-of-pocket medical expenses by an average of **\$514** (Figure 2). The total health and household-related benefit for each unit is **\$14,148**<sup>8</sup>.

<sup>&</sup>lt;sup>6</sup> Expressed in 2022 dollars. Tonn, B., D. Carroll, S. Pigg, M. Blasnik, G. Dalhoff, J. Berger, E. Rose, B. Hawkins, J. Eisenberg, F. Uncar, I. Bensch, and C. Cowan. 2014. Weatherization Works – Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program. Oak Ridge National Laboratory, ORNL/TM-2014/338.

<sup>&</sup>lt;sup>7</sup> Tonn, B., D. Carroll, S. Pigg, M. Blasnik, G. Dalhoff, J. Berger, E. Rose, B. Hawkins, J. Eisenberg, F. Uncar, I. Bensch, and C. Cowan. 2014. Weatherization Works – Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program. Oak Ridge National Laboratory, ORNL/TM-2014/338.

<sup>&</sup>lt;sup>8</sup> Ibid

Figure 2 | Weatherization Non-Energy Benefits



## Federal Coordination Efforts & Braiding Resources

DOE WAP, HHS LIHEAP, <u>U.S. Department of Agriculture (USDA)</u> and multiple programs in HUD continue to collaborate to better support interagency coordination. Each of these agencies serves households with lower incomes, using varying income eligibility requirements. In 2023, DOE Secretary invited HHS, HUD and USDA to create a Memorandum of Understanding (MOU) to fulfill the following goals and objectives:

- Streamline eligibility.
- Improve interagency data sharing.
- Initiate program evaluations.
- Support workforce development.
- Provide joint training and technical assistance.
- Align Justice40 strategies.

DOE will also pursue coordination with <u>HUD's Office of Community Planning and Development (CPD)</u>, <u>USDA's Rural Development Office</u>, and other federal agencies to understand the potential for leveraging resources. DOE WAP continues to work with our providers to address additional barriers, facilitate effective braiding of funds, and improve program implementation and flexibility.

DOE is committed to ensuring our providers are fully supported in their efforts to use resources effectively and meet community needs through leveraging nontraditional sources of funds for repairs and costs that WAP is not able to address through our DOE program.

#### Weatherization in Action

The national WAP network offers a streamlined delivery system to provide high quality, energy-efficient services and improvements in single family homes, manufactured homes, and multifamily buildings and in both owner-occupied and rental properties.

Professionally trained weatherization crews utilize the most advanced technologies to address energy use and improvements. Crews use computerized energy audits and advanced diagnostic equipment, such as blower doors, pressure pans, and infrared cameras, to determine the most cost-effective measures appropriate for each home.

Once a customized work order is created, trained crews install the identified energy efficiency and health and safety measures. Figure 3 illustrates the most typical WAP measures installed in a home. When the work is completed, a certified <u>Quality</u> <u>Control Inspector (QCI)</u> ensures all work was installed correctly to the <u>Standard Work Specifications (SWS)</u> and the home is safe for the occupants.

Figure 3 | Typical Weatherization Measures





- Clean, tune, repair, or replace heating and/or cooling systems.
- Install duct and heating pipe insulation.
- Repair leaks in heating/cooling ducts.
- Install programmable thermostats.
- Repair/replace water heaters.
- Install water heater tank insulation.
- Insulate water heating pipes.
- Install solar water heating systems.

- HEALTH & SAFETY
  MEASURES
- Perform heating system safety testing.
- Perform combustion appliance safety testing
- Repair/replace vent systems to ensure combustion gas draft safely outside.
- Install mechanical ventilation to ensure adequate indoor air quality.
- Install smoke and carbon monoxide alarms when needed.
- Evaluate mold/moisture hazards.
- Perform incidental safety repairs when needed.



- Install insulation where needed.
- Perform air sealing.
- Repair/replace windows/doors.
- Install window film, awnings and solar screens.
- Repair minor roof and wall leaks prior to attic or wall insulation.



- Install efficient light sources.
- Install low-flow showerheads.
- Replace refrigerators with energy efficient models.



- Educate on potential household hazards such as carbon monoxide, mold & moisture, fire, indoor air pollutants, lead paint and radon.
- Demonstrate the key functions of any new mechanical equipment or appliances.
- Discuss the benefits of using energy efficient products.

## **Program History**

WAP was created in 1976 under <u>Title IV of the Energy Conservation and Production Act</u> to assist low-income families at a time when most Americans were dramatically affected by the 1973 oil crisis. Escalating home heating bills were a heavy burden on household budgets, sinking many families into debt. Low-income families in cold-climate states suffered the most severe consequences.

In Maine, state officials and community action agencies worked with homeowners and renters to <u>seal air leaks</u> in homes. These measures cut energy bills and saved oil. Out of this effort, the nation's first weatherization program was developed.

In this early phase, volunteers and job trainees installed low-cost conservation measures, such as covering windows with plastic sheeting, <u>caulking</u> and <u>weatherstripping</u>, to reduce home heating bills. By the 1980s, the Program focused on more permanent and cost-effective measures, such as adding <u>insulation</u> (with its long track record of effectiveness) and improving efficiency in heating systems. Today's home performance industry, made up of for-profit companies, is based on the techniques and technologies developed by WAP.

In the 1990s, the trend toward emphasizing more cost-effective measures continued with the widespread adoption of advanced energy audits and diagnostic equipment. The use of computerized <u>energy audits</u> improved the cost effectiveness of the Program. <u>Blower door</u>-directed air sealing has enabled agencies to diagnose and solve infiltration problems more accurately. The integration of advanced diagnostic equipment has also improved the identification of energy-related health and safety problems, such as carbon monoxide leaks caused by faulty furnaces and inoperable vent flues.

Cooling efficiency measures were integrated into the Program in 1994, including air conditioner replacement, <u>ventilation equipment</u>, and screening and shading devices. These measures have made a big impact in warm climates, where cooling costs are often higher than heating costs.

By 1996, the Program's performance improved significantly due to the implementation of many of the recommendations resulting from a National Evaluation conducted by Oak Ridge National Laboratory and other DOE-supported research projects. Despite funding reductions during this period, technical advances produced almost 70% higher energy savings per dwelling. This was achieved through improved training, auditing tools, and management practices.

Additional regulatory and legislative changes in the late 1990s increased flexibility for states. The average amount of spending per home was raised and the requirement that 40% of Program funds be spent on materials was removed in response to the nationwide integration of advanced energy audits. Electric baseload measures were approved and incorporated in 2000.

Also in 2000, DOE increased flexibility for providers to ease budget constraints related to health and safety expenditures. To help Grantees weatherize more multifamily dwelling units, the eligibility criteria was changed to allow the weatherization of units where low-income tenants account for half of the building's residents in certain situations.

In a 2006 rulemaking, DOE allowed the eligibility of certain renewable energy systems for funding and installation under the <u>Energy Policy Act of 2005</u> and established criteria for their performance and quality standards.

The Energy Independence and Security Act of 2007 (EISA), which reauthorized the Program, was expanded by DOE during the rulemaking to include any territory or possession of the U.S. in the definition of "states" as an eligible grantee of the Program and created the **Sustainable Energy Resources for Consumers (SERC)** grant program. Section 411(b) of EISA authorizes the DOE Secretary to reserve 2% of the annual appropriations, when over \$275 million, for SERC grants. SERC grants focus on expanding WAP by including materials, benefits, and renewable and domestic energy technologies not traditionally included in formula WAP.

As part of the <u>American Recovery and Reinvestment Act of 2009</u> that was signed into law on February 17, 2009, WAP was appropriated \$5 billion in additional funding to support jobs, spur economic growth, and expedite the weatherization of more low-income homes. Through the Recovery Act, the Program weatherized over 1,000,000 homes during three years of the Act.

In December 2020, the <u>Consolidated Appropriations Act</u>, 2021 (P.L. 116-260) was passed and included <u>Energy Act of 2020</u>. Within the Energy Act, Section 1011 reauthorized WAP through FY 2025, increased administrated funds from 10 to 15% of the grant and provided the authority to "reweatherize" a home if 15 years have passed since the original services were provided. In addition, Section 414D of the Energy Act directed DOE to provide financial assistance through a competitive process for **WAP Enhancement & Innovation (E&I)**. For fiscal years 2021 – 2025, available funding for WAP E&I is based on a percentage of the annual DOE WAP appropriation, with a cap of \$25 million per year.

The passing of the **Bipartisan Infrastructure Law (BIL)** in 2021 invested \$3.5 billion into the Weatherization Assistance Program with a goal of reducing greenhouse gas emissions while lowering energy costs for 700,000 low-income U.S. households. Along with BIL, the Biden Administration also issued Executive Order 14008, Tackling the Climate Crisis at Home and Abroad. Section 223 of EO 14008 established the Justice40 Initiative, which directs 40% of the overall benefits of certain Federal investments – including investments in clean energy and energy efficiency; clean transit; affordable and sustainable housing; training and workforce development; the remediation and reduction of legacy pollution; and the development of clean water infrastructure – to flow to disadvantaged communities (DAC).

In March 2022, <u>H.R. 2471</u>, the Consolidated Appropriations Act was signed into <u>law</u>. This law appropriated \$15 million to a **Weatherization Readiness Fund (WRF)** and another \$30 million was authorized in 2023. WRF is allocated to WAP Grantees to address needed repairs in homes that historically would result in dwellings being deferred from receiving WAP services. These new initiatives will further increase WAP's impact across the country and help create more sustainable neighborhoods and communities.

With the latest program expansions, DOE's Weatherization Assistance Program continues to evolve as a sophisticated residential program that addresses whole-house energy efficiency, promotes renewable energy sources and innovative technologies, and supports the greater community through workforce development and investments in disadvantaged communities.

## **Funding and Production History**

Many Grantees use DOE WAP funding as the foundation to attract other funding sources. The core funding received from DOE often provides for the training, technical assistance, and administrative needs for a state, territory, or local organization. Leveraging additional dollars allows the local programs to increase the variety of services offered and the number of homes served.

Table 1 reflects the historic DOE appropriations and units weatherized since the Program's inception. Leveraged funds can be credited with increasing the total number of dwellings served through WAP to over **7.2 million**.

Table 1   Weatherization Assistance Program	DOE Funding and Production (1977 - 2023)	)
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Year	DOE Appropriation (in Millions)	Units Weatherized w/ DOE \$	Cumulative DOE Units	Year	DOE Appropriation (in Millions)	Weatherization Readiness Funds (in Millions)	Units Weatherized w/DOE Formula \$	Units Weatherized w/ARRA \$	Cumulative DOE Units
1977	\$27.5	1,622	1,622	2001	\$153.0		77,709		2,762,155
1978	\$65.0	6,742	8,364	2002	\$230.0		104,860		2,867,015
1979	\$199.0	15,387	23,751	2003	\$223.5		105,953		2,972,968
1980	\$199.0	232,751	256,502	2004	\$227.2		106,099		3,079,067
1981	\$175.0	352,906	609,408	2005	\$228.2		100,532		3,179,599
1982	\$144.0	122,992	732,400	2006	\$242.6		98,626		3,278,225
1983	\$245.0	156,629	889,029	2007	\$204.6		104,532		3,382,757
1984	\$190.0	209,261	1,098,290	2008	\$227.2		95,460		3,478,217
1985	\$191.0	163,860	1,262,150	2009	\$450.0		101,153	7,343	3,586,713
1986	\$182.1	149,047	1,411,197	2010	\$210.0		49,982	238,317	3,875,012
1987	\$161.3	105,440	1,516,637	2011	\$174.3		36,878	309,579	4,221,469
1988	\$161.3	105,465	1,622,102	2012	\$68.0		50,419	226,121	4,498,009
1989	\$161.3	85,115	1,707,217	2013	\$137.9		49,834	23,103	4,570,946
1990	\$162.0	84,441	1,791,658	2014	\$179.2		38,099	1,699	4,610,744
1991	\$198.9	105,769	1,897,427	2015	\$191.8		34,389	527	4,645,660
1992	\$194.0	99,587	1,997,014	2016	\$213.8		31,413		4,667,073
1993	\$185.4	103,394	2,100,408	2017	\$226.2		38,626		4,715,699
1994	\$206.8	114,904	2,215,312	2018	\$250.4		33,819		4,749,518
1995	\$214.8	102,981	2,318,293	2019	\$262.5		32,451		4,781,969
1996	\$111.7	76,393	2,394,686	2020	\$302.1		24,183		4,806,152
1997	\$120.8	71,597	2,466,283	2021	\$283.375		32,338		4,838,490
1998	\$124.8	68,470	2,534,753	2022	\$283.04 \$3,168.0 (BIL)*	\$15.0	29,733		4,868,223
1999	\$133.0	71,984	2,606,737	2023	\$298.920	\$30.0	25,026**		4,893,249
2000	\$135.0	74,316	2,684,446		*Bipartisan Infrastructure Law **FY 2023 production is still being reported				

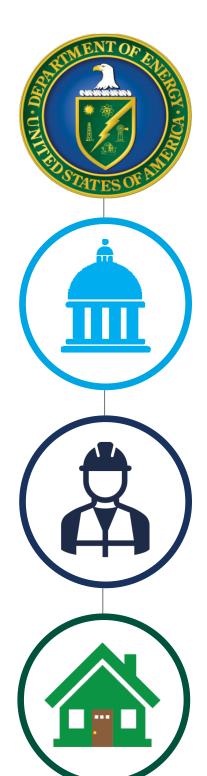
## Organizational Structure

DOE awards grants to states, the District of Columbia, the five U.S. territories and American Indian Tribes which then contract with local organizations to deliver weatherization services to eligible residents.

**FEDERAL** 

STATE

OCAL



## **U.S. Department of Energy**

Office of State and Community Energy Programs (SCEP)

Weatherization Assistance Program

#### **WAP Grantees**

50 States
District of Columbia
5 U.S. Territories
American Indian Tribes

## **WAP Subgrantees**

~ 700 Local Weatherization Providers Community Action Programs & Local Governments

Agency-Based Crews and/or Private Subcontractors

# **WAP Clients - Homeowners/ Renters in:**

Single Family Housing Manufactured Housing Multifamily Housing

## **Program Management**

#### <u>U.S. Department of Energy - Headquarters</u>

Office of State and Community Energy Programs (SCEP) Weatherization Assistance Program 1000 Independence Avenue, SW Washington, DC 20585-0121 (202) 586-1510

## **Program Support**

#### Community Action Partnership (National CAP)

1020 19th Street NW, Suite 700 Washington, DC 20036 | (202) 265-7546

#### **Economic Opportunity Studies (EOS)**

400 North Capitol Street, Suite G-80, Washington, DC 20001 | (202) 628-4900

#### Lawrence Berkeley National Laboratory (LBNL)

1 Cyclotron Road, Berkeley, CA 94720 | (510) 486-4000

## National Association for State Community Services Programs (NASCSP)

111 K Street, NE, Suite 300, Washington, DC 20002 | (202) 624-5866

## National Community Action Foundation (NCAF)

PO Box 78214, Washington, DC 20013 | (202) 842-2092

## National Renewable Energy Laboratory (NREL)

15013 Denver West Parkway, Golden, CO 80401 | (303) 275-3000

## Oak Ridge National Laboratory (ORNL)

PO Box 2008, MS6070, Oak Ridge, TN 37831-6070 | (865) 574-0749



## Office of State and Community Energy Programs (SCEP)

The Office of State and Community Energy Programs (SCEP) at the U.S. Department of Energy works with state and local organizations to significantly accelerate the deployment of clean energy technologies, catalyze local economic development and create jobs, reduce energy costs, and avoid pollution through place-based strategies involving a wide range of government, community, business and other stakeholders.

SCEP's goal is to extend the capacity and capabilities of states, Tribes, local governments, schools, and community-serving organizations to implement high-impact, self-sustaining clean energy projects that center the needs of low-income and Disadvantaged Communities (DAC).

SCEP does this through the management and oversight of **\$16 billion** worth of formula grants, competitive grant awards, consumer rebate grants, and technical assistance.

## **SCEP Strategic Priorities**



Center and deliver on J40 priorities



Deploy clean energy technologies



Catalyze local economic development



Create jobs



Avoid pollution through place-based strategies



Reduce energy costs

## LEGISLATIVE & REGULATORY TIMELINE

#### Legislation

- 1. Energy Conservation in Existing Buildings Act of 1976 (Title IV of the Energy Conservation and Production Act), Public Law 94-385, August 14, 1976.
- 2. National Energy Conservation Policy Act (NECPA), Title II, Part 2, Public Law 95-619, November 9, 1978.
- 3. Energy Security Act (ESA), Title V, Subtitle E, Public Law 96-299, June 30, 1980.
- 4. Job Training Partnership Act, Public Law 97-300, October 13, 1982.
- 5. Human Services Reauthorization Act of 1984, Public Law 98-558, October 30, 1984.
- 6. State Energy Efficiency Programs Improvement Act (SEEPIA), Public Law 101-440, 1990.
- 7. Energy Act of 2000, Public Law 106-469, October 19, 2000.
- 8. Energy Act of 2005, Public Law 109-58, August 8, 2005.
- 9. Energy Independence and Security Act of 2007, Public Law 110-140, December 19, 2007.
- 10. American Recovery and Reinvestment Act of 2009 (ARRA), Public Law 111-5, February 17, 2009.
- 11. Consolidated Appropriations Act, 2021, and Energy Act of 2020, Public Law 116-260, December 27, 2020.
- 12. Infrastructure Investment and Jobs Act (IIJA) or Bipartisan Infrastructure Law (BIL), Public Law 117-58, November 15, 2021
- 13. Consolidated Appropriations Act, 2022, Public Law 117-103, March 15, 2022.
- 14. Consolidated Appropriations Act, 2023, Public Law 117-328, December 29, 2022.

#### Regulations

- 1. 10 CFR Part 440, Establishment of Regulations, Final Rule, published June 1, 1977, effective May 25, 1977.
- 2. 10 CFR Part 440, Final Rule, published and effective January 2, 1979, amended regulations based on the experience gained during the first year of the WAP.
- 3. 10 CFR Part 440, Final Rule, published May 31, 1979, effective July 2, 1979, amended the regulations as mandated by NECPA.
- 4. 10 CFR Part 440, Final Rule, published August 29, 1979, effective November 27, 1979, amended regulations as mandated by section 231(b)(1) of NECPA.
- 5. 10 CFR Part 440, Interim Rule, published and effective February 27, 1980.
- 6. 10 CFR, Amendment to Interim Rule, published June 1, 1981, effective July 1, 1981, made changes to the Interim Rule mandated by ESA.
- 7. 10 CFR Part 440, Amendment to Interim Rule, published and effective March 3, 1982, made changes mandated by section 573 of ESA.
- 8. 10 CFR Part 440, Final Rule, published January 27, 1984, effective February 27, 1984.
- 9. 10 CFR Part 440, Interim Final Rule, published January 4, 1985, effective February 4, 1985.
- 10. 10 CFR Part 440, Interim Final Rule, published December 5, 1985, effective January 6, 1986, implemented changes mandated by the Human Services Reauthorization Act of 1984

#### Regulations, continued

- 11. 10 CFR Part 440, Final Rule, published March 4, 1993, effective April 4, 1993, implemented changes mandated by SEEPIA.
- 12. 10 CFR Part 440, Interim Final Rule, published June 5, 1995, effective July 5, 1995, implemented changes to the allocation formula.
- 13. 10 CFR Part 440, Interim Final Rule, published December 8, 2000, effective January 8, 2001, implemented changes to improve operation of the program that evolved since the last rulemaking in 1995.
- 14. 10 CFR Part 440, Direct Final Rule, published June 22, 2006, effective August 21, 2006, implemented changes mandated by the Energy Policy Act of 2005.
- 15. 40 CFR Part 745, Final Rule, published April 22, 2008, effective June 23, 2008, EPA Lead; Renovation, Repair, and Painting Program.
- 16. 10 CFR Part 440, Final Rule, published and effective on March 25, 2009, amended program to include the US Territories and Puerto Rico.
- 17. 10 CFR Part 400, Final Rule, published January 25, 2010, effective February 24, 2010, amended the eligibility provisions applicable to multi-unit buildings.
- 18. 10 CFR Part 440, Interim Final Rule published March 11, 2010, Final Rule published June 7, 2010, effective on July 7, 2010, Weatherization Assistance for Low-Income Persons: Maintaining the Privacy of Applicants for and Recipients of Services.

19. 10 CFR Part 200 and Part 910, Final Rule published September 24, 2015, effective on October 26, 2015, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

#### **TIMFLINE**

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1974	Pilot	Pilot
1976	1	
1977		1
1978	2	
1979		2,3,4
1980	3	5
1981		6
1982	4	7
1984	5	8
1985		9
1986		10
1990	6	
1993		11
1995		12
2000	7	
2001		13
2005	8	
2006		14
2007	9	
2008		15
2009	10	16
2010		17, 18
2015		19
2020	11	
2021	12	
2022	13	
2023	14	

#### 1976

# Energy Conservation in Existing Buildings Act of 1976, Title IV of the Energy Conservation and Production Act, Public Law 94-385, August 14, 1976

- Served as the enabling legislation for the Weatherization Assistance Program.
- Gave priority service to elderly and disabled low-income persons.
- Established initial set of allowable weatherization materials.
  - Materials may be added by rule.
- Directed the Secretary of Energy to make grants to states and Indian Tribal Organizations for weatherizing dwelling units occupied by low-income families, particularly those where elderly or handicapped lowincome persons reside.
- Directed the Secretary to publish proposed regulations for the Program that:
  - Prescribed standards for weatherization materials; and
  - Insured that:
    - » The benefits of weatherization in connection with leased dwelling units accrued primarily to low-income tenants.
    - » Rents on such dwelling units would not be raised because of any increase in the value due to weatherization.
    - » No undue or excessive enhancement would occur to the value of such dwelling units.
- Gave authority to the Secretary to determine if the low-income members of Indian Tribes were not receiving benefits equivalent to other low-income persons in a state and that the members of the tribe would be better served by a direct grant.

- Directed the Secretary to provide financial assistance to each state on the basis of the relative need for weatherization assistance among the
  - low-income persons throughout the states, taking into account the following factors:
  - The number of dwelling units to be weatherized.
  - Climatic conditions.
  - The type of weatherization work to be done.
  - Other factors that the Secretary may determine necessary.
- If the State did not submit an application, any unit of general purpose local government of sufficient size or a community action agency are allowed to submit an application.
- Directed the Secretary to provide no financial assistance unless the applicant had provided reasonable assurances that it had:
  - Established a policy advisory council.
  - Established priorities to govern the provision of Weatherization Assistance Program.
  - Established policies and procedures to assure that financial assistance will be used to supplement, not supplant, state or local funds, and increase the amount of leveraged non-Federal funds, including:
    - » Securing, to the maximum extent practicable, volunteers pursuant to the Comprehensive Employment and Training Act (CETA) of 1973.
    - » Complying with the limitations set for administrative, materials, and labor expenditures.
    - » Selection on the basis of public comment received during a public hearing.

#### 1978

#### National Energy Conservation Policy Act (NECPA), Title II, Part 2, Public Law 95-619, November 9, 1978

- Increased eligibility level from the poverty level to 125% of poverty.
- Allowed a higher eligibility level if determined necessary by the Administrator, Secretary of Agriculture, and the Director of the Community Services Administration.
- Relaxed eligibility requirement from "in which the head of the household is a low-income person" to "occupied by low-income families."
- Added the requirement to establish program regulations within 60 days of law enactment.
- Added requirement to establish procedures to determine the optimum set of cost-effective measures taking into consideration the cost of the weatherization materials, variation in climate and the value of the energy savings.
- Defined and listed specific weatherization materials.
- Limited administrative expenditures to 5% for states.
- Limited expenditures to \$800 for materials, tools, equipment, transportation, on-site supervisory personnel, and incidental repairs, but allowed for higher amount if state policy advisory council requested and the Secretary approved it.
- Funding section revised to specify authorization of appropriations for 1979-1981, and required these funds to remain available until expended.

#### Energy Security Act (ESA), Title V, Subtitle E, Public Law 96-294, June 30, 1980

- Increased limit on administrative expenditures to 10%, except that not more than half may be used by the state.
- Increased \$800 limit for weatherization materials to up to \$1,600 if Comprehensive Employment and Training Act (CETA) labor was unavailable.
- Required the applicant to select Subgrantees on the basis of public comment received during a public hearing.

Applicants were required to provide assurances that preference was given to community action agencies or other public or non-profit entities provided such selection was based on the agency's experience and performance in weatherization or housing renovation activities, experience assisting low-income persons in the area to be served, and the capacity to undertake a timely and effective Weatherization Assistance Program. Further, preference was required to be given to any community action agency or other public or non-profit entity which had or was then currently administering an effective weatherization program or program under the Economic Opportunity Act of 1964.

- Required that the efforts of the DOE Weatherization
   Assistance Program and weatherization program
   carried out at the Department of Agriculture and the
   Community Services Administration to accomplish
   uniform results among the state in any area with similar
   climatic conditions.
- Increased the \$100 limit for incidental repairs to \$150.

1982 1984 Job Training Partnership Act, Human Services Reauthorization Act of Public Law 97-300, 1984, Public Law 98-558, October 13, 1982 October 30, 1984 • Eligibility criteria added: Made funds available for job training programs or services including regional or nationwide efforts to develop a labor force with skills that promote the • If a state elects, assistance under the Low-Income use of renewable energy technologies, energy Home Energy Assistance Act of 1981 provided conservation, and the weatherization of homes that such basis is at least 125% of the poverty level occupied by low-income families. as determined by the Office of Management and Budget (OMB). Directed the Secretary to provide directly or through grants, contracts, or other arrangements, • Weatherization materials added: appropriate pre-service and in-service training for specialized, supportive, supervisory, or other • Furnace efficiency modifications including: personnel including job skills and appropriate technical assistance. » Replacement burners, furnaces, or boilers. » Devices for minimizing energy loss through heating system, chimney, or venting devices. » Electrical or mechanical furnace ignition systems that replace standing gas pilot lights. Removed requirement that adding allowable weatherization materials required a rulemaking. Required that at least 40% of the funds provided for materials, labor, and related matter must be spent for materials. Expenditure limit increased to an average of \$1,600. Added reweatherization restrictions. Established a performance fund.

#### 1990

#### State Energy Efficiency Programs Improvement Act (SEEPIA), Public Law 101-440, October 18, 1990

- Began adjusting the \$1,600 statewide average annually by the lesser of the Consumer Price Index (CPI) or 3%.
- Established a separate expenditure average for capital-intensive heating or cooling modifications.
- Allowed a waiver of 40% material cost requirement if a state adopted advanced energy audit procedures that:
  - Meet standards established by the Secretary after consultation with the State Energy Advisory Board;
  - Establish priorities based on their cost and contribution to energy efficiency;
  - Measure the energy requirement of individual dwelling units and the rate of return of the total conservation investment;
  - Account for interaction among energy-efficiency measures.
- Allowed the use of priority lists in conjunction with the 40% waiver, provided certain requirements were met.
- Allowed Subgrantees whose grants were less than \$350,000 to use up to an additional 5% for administration.
- Added weatherization materials:
  - Replacement air conditioners.
  - Ceiling, attic, and whole house fans.
  - Evaporative coolers.
  - Screening.
  - Window films and shading devices.

- Expanded protection for renters:
  - Allowing benefits and no rent increase even for renters paying for energy through rent.
  - Establishing complaint procedures.
  - Instituting states may place liens.
  - Allowing states to require financial participation from landlords.
- Relaxed requirement for Job Training Partnership Act labor to when it was "generally" available.
- Extended cut-off date for reweatherization to September 30, 1985.
- Allowed reweatherized units to count as completions provided they did not exceed 5% of total homes weatherized per year.
- Allowed the cost of financial audits to be chargeable as a separate line item cost instead of as an administrative expense.
- Added a reporting requirement to include information and data furnished by each state the average costs incurred in weatherization of individual dwelling units, the average size of the dwelling units being weatherized, and the average income of the households receiving assistance.
- Directed the Secretary to annually update the population, eligible households, climatic, and residential energy use, and all other data used in allocating funds.
- Repealed the Performance Fund.
  - Established a new Incentive Fund.
  - Allowed priority to be given to children.
  - Allowed the weatherization of shelters.
  - Allowed leveraging of non-Federal monies with grant funds.

2000	2005
<ul> <li>Energy Policy Act of 2000, Public Law 106-469, October 19, 2000</li> <li>Increased statewide average expenditure limit per dwelling to \$2,500 to be adjusted annually.</li> <li>Included capital-intensive heating and cooling measures in the increased expenditure limit, thereby eliminating the separate capital-intensive expenditure limit.</li> <li>Deleted waiver of 40% material cost requirement because all States had adopted advanced energy audits.</li> </ul>	<ul> <li>Energy Policy Act of 2005, Public Law 109-58, August 8, 2005</li> <li>Explicitly allowed renewable energy systems to be funded under the Program.</li> <li>Established criteria and a procedure for evaluating renewable energy systems.</li> <li>Increased the permissible funding level to \$3,000 for such systems, indexed to the lesser of the Consumer Price Index (CPI) or 3%.</li> </ul>
2007	2009
<ul> <li>Energy Independence and Security Act of 2007, Public Law 110-140, December 19, 2007</li> <li>Reauthorized the Weatherization Assistance Program.</li> <li>Increased authorized appropriations for FY 2008-2012. The following amounts were appropriated— "(1) \$750,000,000 for fiscal year 2008; "(2) \$900,000,000 for fiscal year 2009; "(3) \$1,050,000,000 for fiscal year 2010; "(4) \$1,200,000,000 for fiscal year 2011; and "(5) \$1,400,000,000 for fiscal year 2012.".</li> <li>Established Sustainable Energy Resources for Consumers (SERC) Grants: <ul> <li>Made funds available to local WAP agencies to expand weatherization services for residential buildings not currently eligible.</li> <li>No funds may be used for these grants if the appropriations for WAP is less than \$275,000,000.</li> </ul> </li> <li>Definition of 'state' expanded to include 'any other territory or possession of the United States.'</li> </ul>	<ul> <li>American Recovery and Reinvestment Act of 2009, Public Law 111-5, February 17, 2009</li> <li>The main purpose of this Act was to stimulate the economy and create and retain jobs.</li> <li>The Act gave preference to activities that started and were completed expeditiously, including a goal of using at least 50% of the funds made available by it for activities that were initiated no later than June 17, 2009.</li> <li>The Act provided the Weatherization Assistance Program \$5 billion in funding for use between April 2009 through March 2012.</li> <li>In addition to the increase in funding, the Act: <ul> <li>Increased the referenced percentage of the poverty level in the definition of "low-income" from 150% to 200%.</li> <li>Increased the limit on the minimum average expenditure per dwelling from \$2,500 to \$6,500.</li> <li>Increased the amount of appropriated funds the Department of Energy could apply towards Training and Technical Assistance (T&amp;TA) from 10% of the appropriated sums up to 20%.</li> <li>Assistance for Previously Weatherized Units: Amended from September 30, 1993, to September 30, 1994.</li> </ul> </li> </ul>

2020	2021
<ul> <li>Consolidated Appropriations Act, 2021, and the Energy Act of 2020, Public Law 116-260, December 27, 2020</li> <li>Reauthorized WAP through FY 2025.</li> <li>Increased authorized appropriations for FY 2021-2025. The following amounts were appropriated—"(1) \$330,000,000 for fiscal year 2021; and "(2) \$350,000,000 for each of fiscal years 2022 through 2025."</li> <li>Amends Section 412(9)(J) of the Energy Policy and Conservation Act (EPCA) to include renewable energy technologies and other advanced technologies as weatherization materials.</li> <li>Authorizes DOE Secretary to take non-energy benefits, such as health and safety improvements, into account when determining appropriate standards and procedures for WAP.</li> <li>Increased administrated funds from 10 to 15 percent of the grant.</li> <li>Amended paragraph (2) of section 415(c) of EPCA to adjust the re-weatherization date to the date that is 15 years after the date previous weatherization was completed.</li> <li>Section 414D of the Energy Act directed DOE to provide financial assistance through a competitive process for WAP Enhancement &amp; Innovation (E&amp;I).</li> </ul>	<ul> <li>Infrastructure Investment and Jobs Act (IIJA) or Bipartisan Infrastructure Law (BIL), Public Law 117-58, November 15, 2021</li> <li>The Act provided WAP \$3.5 billion in funding for fiscal year 2022, to remain available until expended.</li> <li>The Act requires that any work performed on multifamily buildings with not fewer than 5 units and uses the IIJA or BIL funds, the requirements of section 41101 shall apply.</li> </ul>
2022	2023
<ul> <li>Consolidated Appropriations Act, 2022, Public Law 117-103, March 15, 2022</li> <li>Appropriated \$15 million to a Weatherization Readiness Fund (WRF) in 2022 and another \$30 million in 2023.</li> </ul>	Consolidated Appropriations Act, 2023, Public Law 117-328, December 29, 2022  The Act appropriated funding for fiscal year 2023 for both the WAP and WRF.

## WEATHERIZATION TIMELINE

1978





DOE published *Project Retro-Tech, a paper-based audit* for identifying weatherization measures that would produce the most energy savings per dollar spent. *Typical measures included air sealing (with caulk) and insulation ("Blow & Go" installed by volunteer labor)*. Weatherization begins mainly as an envelope improvement program with no building diagnostics or cost-effectiveness requirements.

Allowed low-cost/no-cost general heat waste measures like water flow reducers, limited to 10% of total grant and \$50/home. Grantees are allowed to hire labor if volunteers are unavailable.

1980



1986

Average cost per unit increases to \$1,600 and \$150 limit on incidental repairs is lifted. Replacement heating systems are allowed and early adopters are using blower doors to diagnose home air leakage.

1970s

1980s



1979

Water heater insulation, more substantial air sealing efforts (patching), attic ventilation and others are added to list of approved weatherization materials.



Added building envelope materials, including moveable window insulation and constructing vestibules, pipe and boiler insulation materials, heating/cooling equipment and water heater tune ups. Client education is allowed under the Training and Technical Assistance portion of WAP grants.



1984



A NY State WAP retreat results in a set of principles that will form the basis of the home performance industry. From this, Building Performance Institute (BPI) is established as a NY State program.

1993

Savings-to-Investment Ratio (SIR) was introduced. Advanced home diagnostics takes root as practitioners measure and use energy requirements and take account of measure interactions to receive an audit waiver. Cooling equipment and ventilation equipment are added to the Program.



Weatherization training centers Association for Energy Affordability (AEA) in New York and the Indiana Community Action Association (INCAA) become the first BPI affiliates. They developed and delivered training leading to BPI certification, improving consistency of training and qualifications of WAP staff.

1998

Advanced audits or priority lists are widely used and SIR is guiding weatherization spending. General heat waste reduction measures, electric baseload measures including hot water heaters and refrigerators are added to the Program.



2001

The Recovery Act invests \$5 billion in WAP.

Weatherization training providers ramp up to meet additional staffing requirements nationwide. Workforce standardization launches with the development of the four (4) key weatherization/home performance Job Task Analyses (JTA) & training center accreditation programs.

2009

1990s

1996

Original BPI pilot testing of weatherization staff across multiple states. First weatherization auditors and installers receive BPI certifications.

1999



Process begins to expand existing BPI standards from weatherization to the emerging home performance industry. Combustion diagnostic protocols are developed for gas appliances.



2000s

2006 able energy

Renewable energy systems are added into WAP. Acceptable systems include solar, biomass and geothermal.



2007

The Energy
Independence and
Security Act of 2007
(EISA), which reauthorized the Program, was expanded by DOE during the rulemaking to include any territory or possession of the U.S. in the definition of "states" as an eligible Grantee of the Program and created the Sustainable Energy Resources for Consumers (SERC) grant program.

## WEATHERIZATION TIMELINE



DOE awarded \$90 million in SERC grants to 101 local providers located in 27 states.

Weatherization Innovation Pilot Projects (WIPP) initiative is launched to accelerate innovations in whole-house weatherization.

Sixteen (16) WIPP Grantees were awarded a total of \$30 million in Recovery Act funds.

The four (4) single-family, full-scope, International Standard Organization and International Electrotechnical Commission 17024:2012 accredited HEP certifications were finalized - Quality Control Inspector (QCI), Energy Auditor (EA), Crew Leader (CL), and Retrofit Installer Technician (RIT).

2013



In December 2017, WAP holds the first of four (4) collaborative Solution Summit meetings. The summits were held to bring WAP professionals together to identify barriers to delivering quality weatherization services and identifying ideas to more effectively and efficiently manage local weatherization programs.

2017

## 2010s

2010

Standard Work Specifications for Upgrades to Residential Buildings are published, the result of DOE Weatherization bringing together dozens of industry subject matter experts and stakeholders.

DOE launched an American Consumer Satisfaction Index (ACSI) survey to WAP Grantees and Subgrantees to identify the strengths and areas of improvement for DOE as well as each individual WAP Grantee.

2019

WAP organized a series of Continuous Improvement Workshops in 2019 to gather input from network stakeholders to identify opportunities for improved coordination, training, procedures, and communication across all levels of the WAP. These workshops built on a previous cycle of Solution Summits held in 2017.



DOE launches the first Historic Preservation Prototype Programmatic Agreement for WAP Grantees. The Non-Energy Impacts (NEI) - social cost of carbon and water usage reduction - are approved to be included in the energy audit process.

The President signed the *Bipartisan Infrastructure Law (BIL)* which invested \$3.5 billion into WAP.



In June 2023, DOE released the \$25 million *Funding Opportunity Announcement (FOA) for the BIL E&I* to expand energy retrofits of low-income housing.

2021

2023

## 2020s

2020

The Consolidated Appropriations Act, 2021 (P.L. 116-260) was enacted and included the Energy Act of 2020, which reauthorized WAP through FY 2025, increased administrative funds from 10 to 15 percent of the grant and provided the authority to "reweatherize" a home if 15 years have passed since the original services were provided.

The Energy Act established a new competitive grant program entitled WAP Enhancement & Innovation (E&I) for the fiscal years 2021 – 2025.

2022

In March 2022, H.R. 2471, the Consolidated Appropriations Act was signed into law and appropriated \$15 million to a Weatherization Readiness Fund (WRF) and \$30 million was authorized in 2023.

In early 2023, DOE awarded the first round of Innovation grants: 21 E&I projects, totaling \$37.9 million and five SERC projects totaling \$5.6 million.

Regional Priority Lists are launched for single-family site-built, manufactured homes, and low-rise multifamily projects.



In December 2023, DOE awarded the second round of SERC grants, awarding a total of \$15.2 million to ten WAP Grantees.