

Weatherization Assistance Program

Annual Report
Program Year 2021
April 2021 – March 2022



What is WAP?

Delaware's Weatherization Assistance Program (WAP) provides services at no cost to qualified low-income Delaware families to reduce energy costs. Typical services include air-sealing, insulation, heating system repair, lighting upgrades and minor health-and-safety repairs that are necessary to complete energy-saving measures.

WAP began more than forty years ago with minor services like caulking and weather-stripping. Now, WAP services are provided by highly trained contractors and are guided by sophisticated diagnostics, including blower-door testing, mechanical ventilation strategies and combustion analysis. Those diagnostics, typically completed before and after home weatherization, ensure that energy-saving measures are cost-effective.

More important are the energy savings and other benefits that low-income Delawareans gain from these services. WAP provides long-term savings for Delaware's vulnerable households. Those savings are estimated by the U.S. Department of Energy (DOE) to average \$437 per home per year. Energy improvements also can reduce asthma triggers and improve health and safety. Those benefits help low-income families by reducing medical expenses, lost-work days for parents and out-of-school days for children.

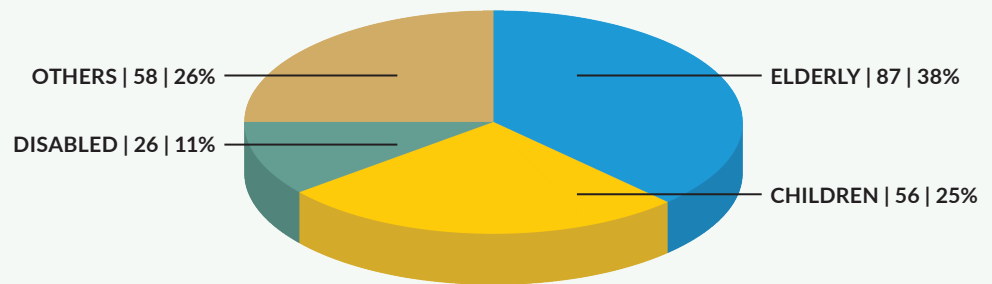
Who is Served?

WAP serves low-income Delaware residents, defined as those with annual incomes verified at or below 200 percent of the Federal Poverty Level. WAP serves all types of housing including detached or attached single-family, mobile or manufactured homes and small multifamily buildings. Services are available to owners and renters, provided the building owner consents and the benefits of weatherization go to low-income residents. Pre-WAP, a program to assist with building repairs that are necessary prior to weatherization, is administered by Energize Delaware. Since its launch in 2016, Pre-WAP has provided essential repairs to 516 homes.

In Program Year (PY) 2021, there were sufficient resources to serve all eligible households, and there was only a relatively short waiting list of eligible households. Prioritization of the waitlist is based on need, as well as age (young and elderly) and special needs of residents.

In PY 2021, WAP served 127 households with a total of 227 Delaware residents.

Delaware Residents Assisted by WAP, PY 2021



My house was freezing before I received Weatherization; it really helped my upstairs and downstairs stay warm. My house is warmer overall. My monthly winter utility bills were up to \$500 a month; my last utility bill was \$120. The workers were well mannered, nice and knew what they were doing. I am so happy with all of the help given to me and I am impressed with the results!

— WAP Client, Georgetown

Duct pressure pan test.



Set up for insulation below manufactured home.



Sources and Uses of WAP Funds

The sources and uses of WAP funds for PY 2021 are:

Sources of Funds

Regional Greenhouse Gas Initiative (RGGI)	\$ 1,328,073
U.S. Department of Energy (DOE)	\$ 921,423
Ratepayer Utility (Delmarva Power)	\$ 396,835
Low Income Home Energy Assistance Program (LIHEAP)	\$ 231,709
	\$ 2,878,040

Uses of Funds

Direct Labor and Materials	\$ 1,164,378
Program Operations	\$ 491,383
Training	\$ 89,662
Savings Verification	\$ 226,375
Administration	\$ 906,242
	\$ 2,878,040

The diversity of funding sources allows the program to do more in each home and greatly leverages the base grant funding from DOE. All funding sources support Direct Labor and Materials as well as other program costs that include:

- **Program Operations:** program marketing and outreach, initial home energy audit, computer modeling, post-weatherization inspection, transportation to home sites, diagnostic equipment, software for program operations and energy modeling, personal protective equipment
- **Training:** training and certification of DNREC staff, subgrantee staff and contractor staff
- **Savings Verification:** independent review of program energy savings
- **Administration:** grantee management, subgrantee management, quality control and assurance, insurance, reporting

Program Year 2021 Highlights

- Provided services to 127 homes, saving a total of 523 million British thermal units. According to the U.S. Environmental Protection Agency, this savings is equivalent to carbon emissions from 12,229 gallons of gasoline consumed. (Estimated savings are based on Delaware homes and client utility data.)
- Contracted with an evaluation firm to estimate weatherization non-energy benefits (NEBs) to include comfort, noise and health. The NEBs were estimated to have a value of \$264 annually. This is in addition to the U.S. DOE average energy savings of \$437 per home annually
- Utilized the Delaware LIHEAP ASSIST database to streamline WAP client intake using categorical eligibility; anticipating at least a 25% increase in client applications
- Began to utilize the Unite DE platform for expediting WAP client referrals
- Received U.S. Department of Energy approval for the Delaware Standard Work Specifications
- Continued response to COVID-19's effects on WAP production, with a need for flexibility to new safety protocols. Other challenges reduced production, including contractor unwillingness to accept liability for working in client's homes, insufficient number of certified workers, some reluctance by clients to have workers in their homes and the resurgence of COVID variants
- Based on the Congressional changes in 2020 to the WAP guidelines, DNREC sent 3,900 letters to previously weatherized homes to attract them back for additional WAP services
- Though under strict COVID-19 constraints, accomplished 491 person-hours of training for auditors and quality control inspectors
- Complied with all DOE requirements
- Maintained all required WAP client documentation in the Delaware Hancock Software
- Maximized program impact by leveraging funds from DOE, LIHEAP, Delmarva Power, and RGGI allowing for the weatherization of 127 homes
- Inspected every home weatherized, using certified Quality Control Inspectors; six completed homes were monitored by the State Program Monitor as required to meet DOE minimum inspection requirement of 10 percent
- Provided weatherization services through four home performance companies

Flue assessment using infrared scanner.



Looking Forward

- Stand up a WAP Multifamily program to serve buildings of 5-25 living units using the Bipartisan Infrastructure Law (BIL) funds
- Receipt of funding for a number of Delaware projects that had been identified through the Congressional Directed Spending (CDS), including \$2 million for DNREC's Low- to Moderate-Income Solar Pilot Project
- Expand service to WAP client homes with installation of solar systems through DNREC's LMI Solar Program (launching on June 1, 2022)
- Provision by DOE of first-time Weatherization Readiness funds in the 2022 grant cycle, with more funds for Delaware's first-in-the-nation pre-weatherization program launched in 2016



WAP auditor using pressure pan to test duct leakage.

Cover: WAP auditor conducting blower door test (upper right); WAP installer setting up for insulation job.

Spotlight on Energy Savings in Millsboro

Our WAP client is a middle-aged woman, living with a disabled child in a 1980 manufactured home with addition (total 2,620 square feet of living space) in southern Delaware. The client uses an electric heat pump for heating and cooling the home. She was very uncomfortable in the home and was seeking lower utility bills and improved comfort. Prior to weatherization services, her electric bill averaged \$323 in the winter and \$207 in the summer. The home received coordinated services through multiple agencies, including new windows and doors, a new roof and a new heat pump. The home had existing attic insulation of R-14.

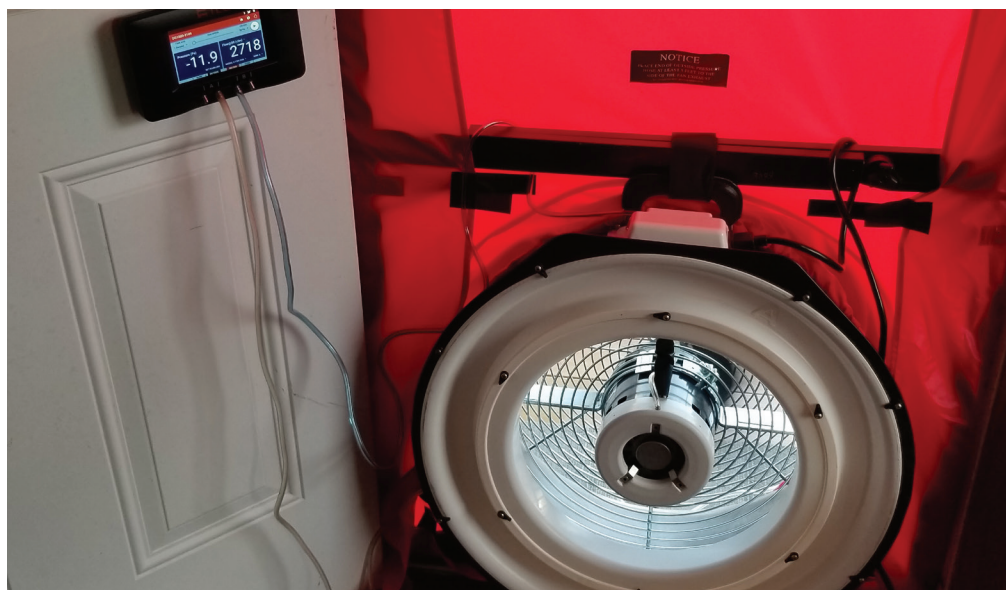
Project Metrics

- Project cost of \$10,272
- Energy savings from weatherization
 - 32 percent lower in the summer
 - 53 percent lower in the winter
- Savings of 6,766 kilowatt hours (kWh) annually
- Annual energy cost savings of \$763 plus improvements to comfort and indoor air quality

Weatherization Measures

- Loose-pack attic insulation
- Belly insulation
- HVAC duct insulation
- Pipe wrap
- Air seal building
- Seal heating registers and ducts

The client was interviewed about the experience of receiving the WAP services and she said, "My comfort has greatly increased because the home is more evenly heated and cooled. I can also feel how much 'tighter' and less drafty the home is due to the weatherization services. My heating bill is about half of what it used to be before weatherization. The installation crew was patient, kind and very neat while in my home. I am so happy with all of the changes I have experienced since the weatherization and I am grateful."



Blower door infiltration test.

Contact Us



Visit de.gov/wap

State of Delaware
Department of Natural Resources and Environmental Control
Division of Climate, Coastal and Energy

To apply for WAP, call Energy Coordinating Agency at 302-504-6111.