

Southwest Virginia Building Upgrade Program

Version 1.0

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Summary

The Southwest Virginia Building Upgrade Program (Building UP) is an energy efficiency improvement program administered by Appalachian Voices. Building UP provides energy assessments, technical assistance and funding for energy efficiency upgrades for community-serving non-profit, municipal government and for-profit small business organizations in the Virginia counties of Buchanan, Dickenson, Lee, Scott, Tazewell, Russell and Wise, and the City of Norton (Southwest Virginia). The purpose of Building UP is to create more resilient, sustainable and safe facilities for under-resourced Appalachian communities.

Background

Development of Building UP was originally funded through the United States Department of Energy's [Building Upgrade Prize](#). A phase 1 prize of \$400,000 was awarded to Appalachian Voices in 2023 to develop the plan for a program capable of installing new heat pumps, weatherization and energy efficiency upgrades at 100+ small commercial buildings in Southwest Virginia.

To develop this program, Appalachian Voices collected information from a wide variety of local stakeholders, including local heat pump and energy efficiency contractors, community colleges, community action agencies, Weatherization Assistance Program (WAP) service providers, utility energy efficiency programs and local building owners. Results showed that while many local buildings have adopted heat pump technologies, many were likely in need of replacement, while weatherization/energy efficiency upgrades were sorely needed across the region.

A building analysis of the region, completed by Guidehouse using the National Renewable Energy Laboratory's ComStock tool, was completed to determine the potential impact of the program in Southwest Virginia. This analysis included data from 1,274 building models in the Central Appalachian Subregion (across VA, WV, TN and KY). The analysis found that small offices were the most prevalent building stock type. Over 50% of buildings were built before 1980 and are likely to exhibit lower building weatherization performance. Electricity was the primary energy source for all uses. Upgrades to wall and roof insulation and heat pumps with electric or natural gas backup indicated the potential for average annual net utility bill savings per building, assuming 30% - 50% energy use reduction at facilities.

To identify the priorities and opportunities for Building UP, a series of stakeholder engagement opportunities and surveys were utilized. Stakeholders emphasized the need for four primary outcomes:

1. Energy efficiency upgrades that reduce operating costs and improve sustainability;
2. Community-serving buildings to remain accessible and functional during emergencies;
3. Energy efficiency workforce development initiatives that are strengthened through local education institutions; and

4. Infrastructure supporting economic growth.

These priorities were incorporated into Building UP by ensuring that the selected community facilities would receive necessary upgrades to prepare for future upgrades, such as solar panels and battery storage capacity. By addressing energy efficiency first, Building UP is designed to provide immediate benefits and support long-term community resilience. Additionally, Appalachian Voices incorporated stakeholder engagement findings by expanding the approach of the program, widening the list of qualifying building types that would be considered applicable. An example of this expanded qualification list includes buildings supporting local economic growth, such as local food hubs. Finally, these conversations supported the approach to utilizing a diverse and local workforce to implement Building UP. By increasing the likelihood of building upgrades being completed by local contractors, we are directly addressing the need for local job creation and training support for current and up-and-coming contractors.

Analysis of the local workforce identified significant differences in capacity based on technology type. Successful community college programming in Southwest Virginia has created a healthy small business heating, ventilation and air conditioning (HVAC) industry capable of serving the program. Interviews with multiple firms across the region indicated reasonable turnaround times and equipment availability for heat pump projects. This analysis also identified a dearth of local energy auditors and commercial weatherization providers. To serve Building UP participants, energy auditors and weatherization providers will be sourced on an as-needed basis during the initiative to provide opportunities for business expansion and discovery. The International Brotherhood of Electrical Workers (IBEW) provides services to the region and will be included when procuring project services.

Following the development of the program plan, Appalachian Voices qualified for a \$400,000 implementation prize through Phase 2 of DOE's Building Upgrade Prize in November of 2024. Unfortunately, DOE's Building Upgrade Prize was paused indefinitely prior to selection confirmation in February 2025. Despite the ongoing pause and potential cancellation of the DOE Phase 2 funding, Appalachian Voices is moving forward with Building UP for Southwest Virginia in ways that balance the program's ability to address the weatherization and energy efficiency upgrade needs of local community facilities with the challenge of replacing more expensive equipment, such as heat pumps. SWVA Building UP will be able to meet the needs of our most under-resourced communities while serving a broader number of facilities.

Goals

Building UP seeks to achieve the following goals by the end of 2026:

- Provide energy audits and building upgrades to at least 15 community facilities in Southwest Virginia
- Invest \$225,000 directly into these community facilities
- Average 20% or greater energy use reduction at upgraded facilities
- Reduce total carbon dioxide emissions by 5.2 metric tons per year

- Create a replicable model for community-centered energy efficiency investment

Qualifying Applicants

To qualify for Building UP, applicants must meet each of the following criteria:

- The building is located in the county of Buchanan, Dickenson, Lee, Scott, Tazewell, Russell or Wise, or the City of Norton in Virginia
- The building is non-residential or mixed-use with non-residential units
- The building or building unit is operational as of the application date
- The applicant has clear community-serving goals and services. Community-serving goals and services are considered to be a benefit, social or material, that an organization provides to the community at no cost to the community member(s). Community-serving goals and services include but are not limited to providing emergency services, public meeting/gathering spaces, educational & training opportunities, WiFi or other communication services, medical services, public kitchen space, child care, meals or supplies during emergencies, general mutual aid, free public computer access, historical or cultural preservation, or public entertainment.
- The applicant is the building owner, or has written support from the building owner

Applicants must also meet one of the following criteria:

- Is a not-for-profit organization
- Is a municipal government
- Is a county government
- Is a small for-profit business (defined in [Virginia Code § 2.2-1604](#))

Qualifying Upgrades

Building UP participants can apply for funding assistance for the following types of qualifying upgrades: weatherization, energy efficiency, heat pump and other technologies or upgrades (see complete list below). All upgrades must be completed by an appropriately licensed contractor where applicable. Weatherization upgrades must be included for participating buildings to maximize energy savings and use reduction. Projects utilizing funding assistance for other upgrades, as identified below, must ensure that weatherization upgrades are included in the project financing and/or funding.

Contractors for each upgrade will be decided collaboratively between Building Up administrators and the participant. The contractor selection process will include 1) seeking at least three quotes; 2) joint selection between Building UP staff and the participant; and 3) written support from the participant to move forward with the identified contractor.

Weatherization

Insulation - participants may utilize fiberglass insulation, mineral wool insulation, cellulose insulation, foam insulation, natural fiber insulation and reflective/radiant barriers. Insulation may be installed in the attic, walls or crawlspaces to achieve recommended R-values.

Air sealing - participants may utilize caulk, spray foams, weatherstripping and rigid foam to fill in gaps and improve the building envelope.

Air duct sealing - participants may address air duct sealing needs, whether or not the project includes new HVAC equipment installation, to ensure systems are being utilized effectively.

Energy Star upgrades - certified doors and windows may be used to replace existing structures where impacts are determined to be significantly greater than air sealing upgrades.

Energy Efficiency

LED lighting - LED bulbs and light fixtures may be included in building upgrades where sufficient need is identified to maximize energy savings.

Energy Star appliances - various appliances may be included, including electric cooking products, refrigerators, heat pump water heaters and tankless water heaters.

HVAC controls - smart thermostats, sensors, system controllers and monitoring stations may be included to increase efficiency and decrease waste from HVAC units

Heat Pumps

Ducted air source heat pump - standard ducted air source heat pumps will be considered between 14.3 and 19 SEER2. Make and models are dependent on participant preference and contractor availability.

Mini-split heat pumps - heat pumps will be considered between 15 and 30 SEER2. Make and models are dependent on participant preference and contractor availability.

Other

Environmental hazard removal - removal of materials such as lead paint or asbestos may be included in upgrade costs so long as their presence negatively impacts the ability to complete other upgrades or if such upgrades would disturb the hazardous materials.

Health and safety upgrades - other upgrades shall be considered if they pose a threat to occupants or upgrade staff. This may include, but is not limited to, mold removal, electrical wiring replacement, air quality improvements and removal and replacement of lead pipes.

Assistance Available

Technical Assistance (TA)

TA will be provided to participants through the assigned project coordinator. TA tasks include, but are not limited to, the following:

- Coordinating project meetings
- Identifying energy auditors
- Coordinating energy audits
- Reviewing audit reports
- Procurement of upgrade contractors
- Identification of financing options
- Coordination of quality assurance testing

Energy Audits

Energy audits will be provided at no cost to the participant. Completed energy audits will determine the most effective building upgrades for the reduction of energy use. Energy audits may include blower door analysis, thermal imaging, building walkthrough, air testing and hazardous materials assessments. Energy auditors must be able to access all locations within the building, including the roof, basement, crawl space, attic and electrical equipment. Post-upgrade energy audits may be completed for quality assurance. Energy auditors will be selected by Appalachian Voices.

Funding Assistance

Building UP may provide up to \$15,000 per participant for Qualifying Upgrades as agreed upon by the participant and Appalachian Voices. If upgrade costs exceed the Funding Assistance allocation, remaining funds must be covered by the participant or a separate finance provider.

Participation in Building UP does not guarantee participants will be awarded funding assistance. Funding assistance will be determined and awarded following the upgrade procurement process. Funding assistance of less than \$15,000 may be awarded, based on total upgrade costs, qualifying upgrade types and other to-be-determined participant factors.

Program Participation Process

Participation in Building UP will follow the following process in most cases. Process changes may be made during implementation as needed to meet program goals.

Step 1: Participant completes and submits the intake form.

Step 2: Eligibility is confirmed by the selection team, and the Participant is accepted into Building UP with an assigned Project Coordinator.

Step 3: Project Coordinator schedules an introductory meeting.

Step 4: Project Coordinator coordinates an energy audit and reports at no cost for the participant.

Step 5: Program Coordinator reviews the audit report with the participant to select upgrades.

Step 6: Participant works with Project Coordinator to procure quotes or proposals for recommended building upgrades.

Step 7: Project Coordinator identifies Building UP funds and applicable loan and grant programs available to fund the recommended building upgrades.

Step 8: Applicant applies for repayable financing and/or grant funding with assistance from Project Coordinator and contractors.

Step 9: Applicant receives and signs approval for loans and/or grants, including the Building UP grant award.

Step 10: Construction/installation is completed by the selected contractors.

Step 11: Project Coordinator coordinates quality assurance testing and reports for the Participant.

Step 12: Participant responds to post-upgrade feedback forms.

Step 13: Participant provides monthly energy bills at least quarterly for no less than 12 consecutive months after upgrades are completed.

Application Process

Complete and submit the intake form at

<https://www.solarfinancefund.org/swva-building-upgrade/> by December 31, 2025. Applicants will be issued an acceptance notification by January 30, 2026.

Additional application periods may be announced after December 31, 2025, as funds remain available. Additional application opportunities will be announced at

<https://www.solarfinancefund.org/swva-building-upgrade/> and an updated SWVA Building UP Pilot Booklet will be made available with the new application timeline.

Intake form questions are listed below for application preparation purposes. No form of email or print application will be accepted. All applications must be submitted through the online intake form.

Intake form questions:

1. Name of organization and person applying
2. Is the applying organization located in an eligible county or city in Southwest Virginia?
3. Physical address of the applying facility
4. What type of organization will the program serve? (Small business, non-profit organization, local government or affiliate, commercial property owner/landlord)
5. What is the type of facility applying to the Building Upgrade Program? Please also describe the organization's community-serving goals and services.
6. What are the applying organization's community-serving goals and/or services?
7. Does the applying organization own the facility applying to the Building Upgrade Program?
8. If the building is not owned by the applying organization, what is the email and phone number of the building owner?
9. What is the applying facility's electric utility?
10. What is the facility's current heating and cooling technology? Ex: geothermal heat pump, air source heat pump (no underground components other than electrical), baseboard heating, natural gas, propane, air conditioning only, wood heating, coal furnace, etc.
11. What technologies are currently being used or are installed at the applying facility? Ex: space heaters, fuel-based backup heater, backup generator, LED lighting, air sealing for doors and windows, energy-efficient windows (double or triple pane), Energy Star-rated appliances, dehumidifiers, solar panels, electric vehicle charging station, etc.
12. What upgrades do you think are most needed for the facility?
13. What technologies are you interested in? (Energy efficiency updates, solar energy, on-site energy storage, air sealing, insulation, new heat pump)
14. Has the building received an energy audit/assessment in the past 5 years?
15. How would the energy savings and identified technologies benefit your organization and the surrounding community?
16. What is the most significant roadblock to completing these upgrades at the applying facility?
17. What is the level of support this effort has from key decision-makers at the applying facility?
18. How did you find out about the Building Upgrade Program?

Selection Process

Appalachian Voices will serve as the decision-making and coordination entity for Building UP. Applicants will be reviewed monthly by a Project Management Team, consisting of Appalachian Voices Staff.

Should an application be denied, staff will provide the applicant the ability to debrief and review areas of improvement. Following this debrief, Applicants may be offered the ability to revise their materials and resubmit.

Following acceptance, the Participants will be assigned a Project Coordinator to serve as the main point of contact and technical assistance provider for that specific project.

Building UP Funding Assistance will be awarded using the same approval process once the upgrade procurement has been completed

Timeline

October 1, 2025 - December 31, 2025 - Round 1 applications accepted

January 30, 2026 - Round 1 participants announced

January 1, 2026 - June 30, 2026 - Round 2 rolling applications accepted (if available)

December 1, 2026 - All upgrades completed

December 1, 2027 - Completion of post-upgrade energy bills collection from participants

Question Submission

Questions should be submitted to austin@appvoices.org. All questions and answers will be provided through email and on the FAQ document, available at <https://www.solarfinancefund.org/swva-building-upgrade/>.