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Strategies for Residential Energy Efficiency and Community Resilience for Floyd County, Kentucky

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December 2024

OAK RIDGE National Laboratory

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C2C Expert Match Program

STRATEGIES FOR RESIDENTIAL ENERGY EFFICIENCY AND COMMUNITY RESILIENCE FOR FLOYD COUNTY, KENTUCKY

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Prepared by
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ABSTRACT

This report outlines the technical assistance provided to Floyd County Fiscal Court, Kentucky, and Vision Granted through the U.S. Department of Energy Clean Energy to Communities Expert Match Program. Floyd County, designated as "distressed" and "disadvantaged," faces significant economic challenges, including limited job prospects, high energy costs, and youth "brain drain."

This technical assistance aims to address these pressing issues by implementing strategies to enhance home energy efficiency and livability while also aligning retrofit efforts with goals for resilience and workforce development. Through targeted guidance, this report aims to empower Floyd County residents and organizations in navigating resources for improving housing conditions, creating workforce opportunities, and enhancing resilience.

The report addresses the following research questions under four topics:

Home Energy Retrofits

1. What are the easiest, low- to no-cost home energy retrofits?

2. Which energy efficiency measures offer the most significant savings on household energy costs?

Repairs and Health and Safety Upgrades

3. What are the most necessary, basic repairs needed to weatherize existing housing?

4. What preventive and remedial health and safety upgrades/repairs should be considered given the home's age and history of flooding?

Navigating Home Retrofit Opportunities

5. What home retrofit services, incentives, resources, and funding opportunities are available to low-income homeowners in Floyd County, Kentucky?

6. What steps and considerations should homeowners follow to identify qualifying home retrofit opportunities for which they are eligible?

7. How can county organizations and home retrofit service providers help homeowners navigate these opportunities?

Aligning Retrofit Support With Goals Around Resilience and Youth and Workforce Development

8. How can housing retrofits support goals related to climate resilience and youth and workforce development?

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1. HOUSING IN FLOYD COUNTY, KENTUCKY

1.1 HOUSING STOCK CHARACTERISTICS

The housing stock in Floyd County primarily consists of single-family detached homes (60%) and manufactured homes (30%), as shown in Figure 1. Notably, 83% of housing stock in Floyd County is over 25 years old, with 47% built before 1980. Older homes often suffer from poor insulation and leaks, inefficient heating and cooling systems, and higher energy consumption. In terms of heating fuel, 64% of housing units in Floyd County rely primarily on electricity, while 29% use natural gas. Approximately 7% of homes use propane, fuel oil, or wood as their main or secondary heating sources.

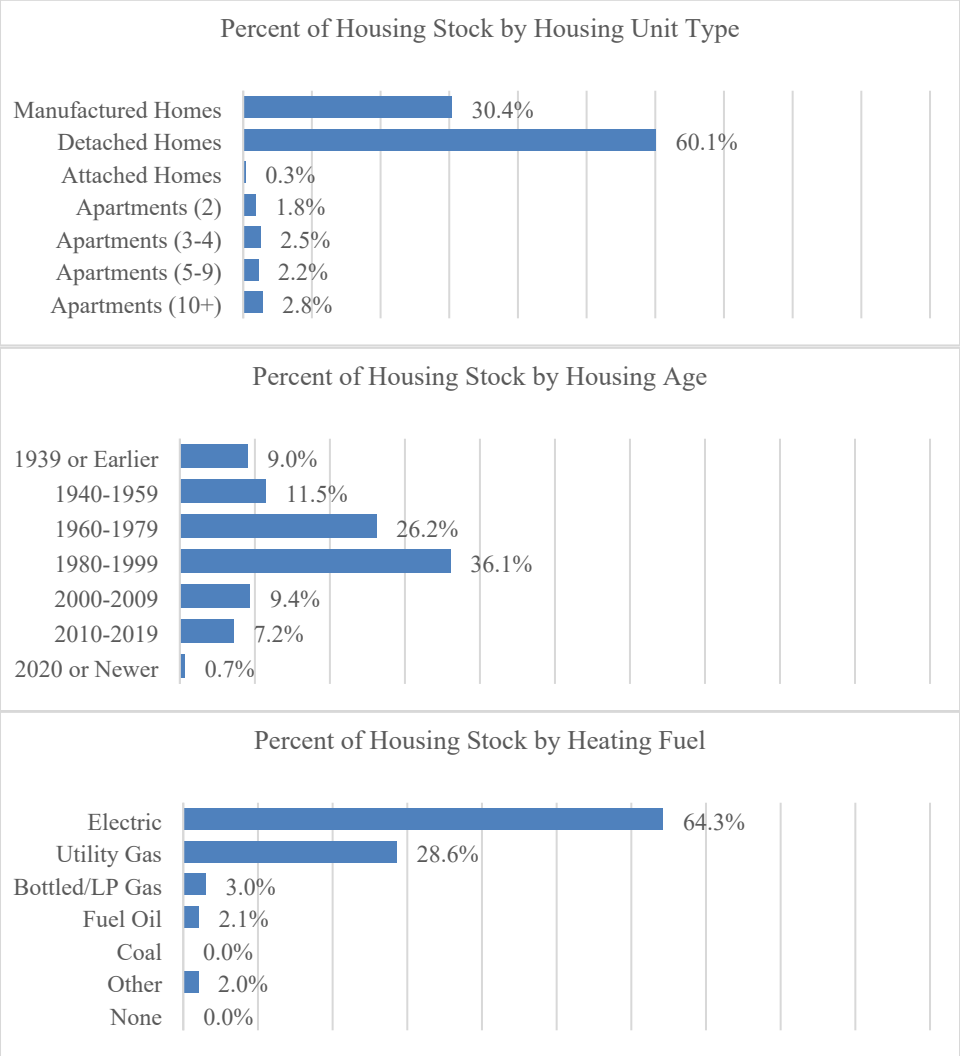

Figure 1. Housing stock characteristics in Floyd County

Figures recreated from data found on the Kentucky Energy Affordability Dashboard

1.2 UTILITY SERVICES

Figure 2 shows Floyd County electric and natural gas service area maps. Electricity in Floyd County is provided by Kentucky Power and Big Sandy Rural Electric Cooperative Corporation (RECC), both regulated by Kentucky Public Service Commission. Kentucky Power, an investor-owned utility, charges a rate of $0.11284 per kilowatt-hour plus a $20 monthly fee. Big Sandy RECC, a rural electric cooperative, charges a rate of $0.08877 per kilowatt-hour plus a $21.95 monthly fee. Unlike electricity, natural gas distribution service areas do not have legal boundaries or legally designated service territories. Natural gas is provided by Columbia Gas of Kentucky, municipal gas utilities, and many small local distribution companies.

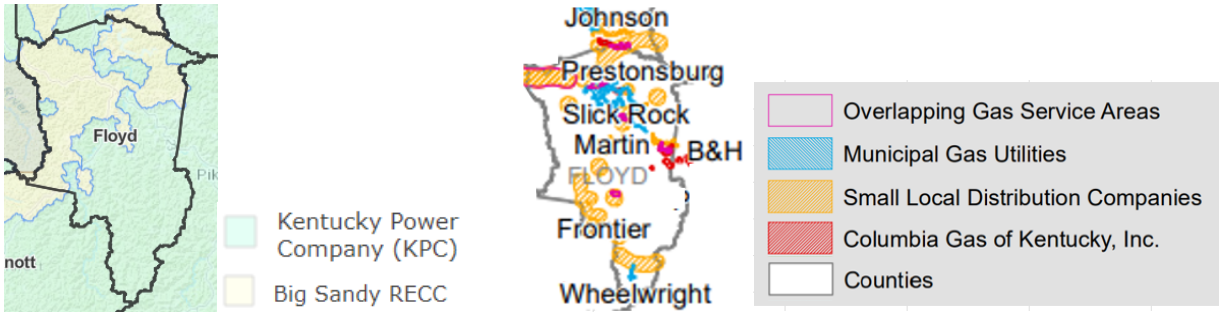

Figure 2. Floyd County electric service area map (left) and natural gas distribution service area map (right)

Maps obtained from Kentucky Energy Dashboard (left) and Kentucky Public Service Commission (right)

1.3 ENERGY AFFORDABILITY

According to the 2020 Residential Energy Consumption Survey, the average household energy expenditure in Kentucky is $1,848 annually, which aligns closely with the national average. However, data from Kentucky Office of Energy Policy's Energy Affordability Dashboard shows that Floyd County experiences an average energy burden of 4%, which rises to 11% for low-income households. Recent data from the 2023–2024 Community Needs Assessment Results indicate that approximately 35% of Floyd County residents live in poverty, surpassing state (17%) and national (12%) poverty rates. Furthermore, around 56% of households earning less than $20,000 per year are considered housing burdened, spending 30% or more of their total income on housing costs. The unemployment rate in Floyd County stands at 6.7%, significantly higher than the state (3.4%) and national (3.9%) averages.

A review of the demographics, energy affordability, and housing characteristics in Floyd County provides insights for tailoring effective energy retrofit strategies. With a significant portion of the population facing high energy burdens and many homes suffering from inefficiencies due to age and construction type, targeted interventions can greatly improve energy efficiency and reduce costs. The following sections provide specific strategies for home energy retrofits and health and safety upgrades, resources for residents and organizations to navigate energy retrofit opportunities, and workforce development initiatives designed to enhance sustainability and economic resilience in the community.

2. HOME ENERGY RETROFITS

What are the easiest, low- to no-cost home energy retrofits? Which energy efficiency measures offer the most significant savings on household energy costs?

2.1 NO-COST ENERGY CONSERVATION MEASURES

These measures can significantly reduce a home's energy consumption and lower utility bills without requiring a financial investment. These simple yet effective actions focus on optimizing everyday habits and using resources more wisely, allowing homeowners to make a real difference in their energy consumption.

Water heater set point: Reduce the water heater temperature to 120°F to save energy and reduce scalding risk. Adjust the thermostat on the water heater, if adjustable, or use a temperature-measuring tool. (Renters may require landlord approval if they do not control the water heater.) Learn more.
Thermostat setting: Lower the thermostat setting in winter and raise it in summer when you're away from home or sleeping. Adjust by 7°F–10°F to save on heating and cooling costs without sacrificing comfort. However, thermostat setback in winter is generally not recommended if using a heat pump. Learn more.
Window coverings: Use shades, blinds, or curtains to improve comfort and reduce heat loss in winter and heat gain in summer. Learn more.
Home appliances: Run only full loads in the dishwasher and dryer; clean dryer filter after each use. Set refrigerator's temperature to 38°F; minimize the number of times you and the family open the refrigerator and freezer. Use smaller cooking appliances rather than a traditional oven to reheat foods or cook small meals. Learn more.
Lighting: Turn off lights when not in use. Keep your curtains or shades open to use daylighting instead of turning on lights. Learn more.
Home electronics: Unplug nonessential electronic devices and chargers when not in use to prevent standby power consumption. Use smart power strips for easier control. Use energy saver settings on devices such as TVs and computers to reduce power use during operation and standby mode. Learn more.
Unused rooms: To reduce heating and cooling demands in unused rooms, consider using heavy curtains, thermal drapes, or draft stoppers. If you have baseboard heaters, wall units, or other in-room systems, set them to a low setting and close the doors. For ducted heating, ventilation, and air-conditioning systems, refrain from closing vents and doors in unused rooms, because this can disrupt temperature and airflow balance, potentially harming the system's performance and lifespan. Learn more.

2.2 LOW-COST ENERGY RETROFITS

These retrofit measures offer practical solutions for managing energy use, lowering utility bills, and improving comfort without requiring a substantial financial investment. Both homeowners and renters can easily implement many of these measures, provided they first consult with landlords when necessary.

Air sealing: Seal gaps and cracks around windows and doors, walls, attic hatches, and plumbing and electrical penetrations, as well as behind electrical outlet and switch covers by using caulk, weather stripping, and expanding foam to prevent drafts and reduce heat loss. Learn more.
Water-using fixtures: Repair leaks in water-using fixtures. Install water-saving faucets and low-flow showerheads to reduce water use and energy required for heating water. Learn more.
Water heater tank wrap and pipe insulation: Insulate the water heater tank with an insulating blanket and hot water pipes with foam pipe wrap to reduce heat loss from the water heater and pipes. Learn more: Insulate hot water pipes and insulate water heater tank.
Lighting replacement: Replace incandescent bulbs with energy-efficient LEDs. LEDs use nearly 90% less energy and last more than 25 times longer. Consider replacing bulbs in high-use areas, such as kitchens and living rooms, first. Learn more.
Storm windows: Install storm windows over existing windows to reduce heat loss. Learn more.
Heating and cooling system maintenance: Clean or replace filters, inspect and service heating and cooling equipment, and seal any leaks in ductwork to ensure efficient operation of heating and cooling systems. Learn more: Maintaining your air conditioner and maintaining your furnaces and boilers.
Programmable thermostat: Install a programmable thermostat and set its schedule to lower the thermostat setting in winter and raise it in summer for unoccupied hours and nighttime setback. Adjust by 7°F–10°F to save on heating and cooling costs without sacrificing comfort. However, thermostat setback in winter is generally not recommended if using a heat pump. Learn more.

2.3 HIGH-IMPACT ENERGY RETROFITS

These measures involve substantial improvements that enhance a home's energy efficiency, often requiring a professional energy audit to determine the most effective package of energy efficiency retrofits based on the existing building and system characteristics. These measures must be installed following the Standard Work Specifications to ensure work performed during home energy upgrades is effective, durable, and safe.

Air sealing:* Seal gaps, cracks, and leaks in the building envelope to improve energy efficiency and reduce heating and cooling losses. Use weatherstripping, caulk, and spray foam. Learn more.
Duct sealing and insulation:* Seal and insulate ductwork to prevent heat loss in heating systems and heat gain in cooling systems. Use duct sealant and apply duct insulation around exposed ducts in unconditioned spaces like attics and basements. Learn more.
Insulation in attic/ceiling, foundation/floor, and walls:* Add or upgrade insulation in key areas to improve thermal resistance to keep indoor temperatures stable. Use fiberglass, cellulose, spray foam, or foam board insulation, as applicable, and focus on areas along the thermal boundary with the greatest need. Learn more.
Windows and doors—replacement, shading devices, storm windows and doors: Replace old windows and doors with energy-efficient models, add shading devices, or install storm windows and

doors to enhance insulation and reduce drafts. Choose ENERGY STAR certified windows and doors for optimal performance. Learn more.
Furnace and air-conditioner replacement (with heat pump):** Replace outdated heating and cooling systems with an ENERGY STAR certified heat pump. Learn more.
Water heater replacement:** Replace old water heaters with energy-efficient models, such as tankless or heat pump water heaters, to lower operating costs. Consider ENERGY STAR certified units (e.g., heat pump water heaters, tankless gas water heaters, and high-efficiency gas storage water heaters). Learn more.
Refrigerator replacement: Replace old refrigerators with ENERGY STAR certified models that offer better energy ratings and features like automatic defrost and improved insulation. Learn more.

*Inflation Reduction Act (IRA) rebates available for energy efficiency measures.
**IRA rebates available for electrification, including heat pump and heat pump water heater installation.

3. REPAIRS AND HEALTH AND SAFETY UPGRADES

What are the most necessary, basic repairs needed to weatherize existing housing? What preventive and remedial health and safety upgrades/repairs should be considered given the home's age and history of flooding?

3.1 BASIC REPAIRS AND IMPROVEMENTS

Use Health and Safety Audit Data Collection Forms for checklists on the following topics to systematically identify potential hazards and structural issues that could compromise safety and comfort. Use corresponding flowcharts from the Health and Safety Audit Recommendations, and prioritize essential repairs, ensuring a secure living environment for all residents.


Health & Safety Audit Data Collection Forms


Health and Safety Audit Recommendatic

General safety: This checklist identifies the presence of hazards related to general injury, hazards for elderly and disabled residents, and child safety hazards.
Structural safety: This checklist identifies structural safety issues with the roof, walls, windows and doors, stairs, ceilings, floors, and outside spaces (i.e., porches, patios, or balconies).
Electrical safety: This checklist identifies the presence of knob and tube wiring and other electrical hazards.
Fire safety: This checklist identifies missing smoke alarms, carbon monoxide alarms, and fire extinguishers as well as the presence of fire hazards.

3.2 PREVENTIVE AND REMEDIAL HEALTH AND SAFETY UPGRADES AND REPAIRS

Use the Health and Safety Audit Data Collection Forms for screening and detailed checklists on the following topics to identify issues. Use corresponding flowcharts from the Health and Safety Audit Recommendations to determine preventive and remedial health and safety upgrades and repairs.


Health & Safety Audit Data Collection Forms


Health and Safety Audit Recommendatic

Mold, moisture, and water damage: This is a significant concern in Floyd County owing to frequent and severe flooding. A screening checklist is used to determine whether a detailed assessment is needed. The detailed checklist records the evidence of the issue and helps with source identification.
Lead: Lead-based paint may be present in homes built before 1978. A screening checklist is used to determine whether a detailed assessment is needed. The detailed checklist assesses the potential disturbance to lead paint caused by retrofit activity.
Asbestos: Asbestos may be present in homes built before 1990. A screening checklist is used to determine whether a detailed assessment is needed. The detailed checklist records the potential presence of asbestos and disturbance caused by planned retrofit activities.

Radon: Floyd County falls under U.S. Environmental Protection Agency Radon Zone 2 (i.e., medium potential for radon exposure). A screening checklist is used to determine whether a detailed assessment is needed, especially in cases where planned retrofits will decrease the infiltration rate. Radon assessment is not required for mobile homes without skirting. Conduct radon testing followed by source identification to identify potential radon entryways through flooring or the foundation.
Combustion safety: Combustion safety issues may be present in homes with combustion appliances. A detailed survey includes a safety inspection to identify general combustion safety issues and issues specific to combustion appliances; the survey also includes performance testing of the combustion appliance and combustion appliance zone.
Formaldehyde and volatile organic compounds: A screening checklist is used to determine whether a detailed assessment is needed. The detailed checklist helps with source identification.
Pest infestation: A screening checklist is used to determine whether a detailed assessment is needed. The detailed checklist records evidence of the issue and helps with source identification.
Ventilation improvement: Proper ventilation reduces moisture buildup and improves indoor air quality. A detailed survey is used to assess ventilation deficiencies in the kitchen, bathrooms, and the whole house; the survey calculates ventilation requirements to comply with American Society of Heating, Refrigeration and Air-Conditioning Engineers Standard 62.2.

4. NAVIGATING HOME RETROFIT OPPORTUNITIES

What home retrofit services, incentives, resources, and funding opportunities are available to low-income homeowners in Floyd County, Kentucky?

4.1 HOME RETROFIT SERVICES AND FINANCIAL INCENTIVES OPPORTUNITIES FOR FLOYD COUNTY RESIDENTS

HOME ENERGY AUDIT AND WEATHERIZATION	Eligibility
The Weatherization Assistance Program is delivered to individuals in Floyd County by the Big Sandy Area Community Action Program (BSACAP). Interested low-income families apply for assistance through the Kentucky Housing Corporation. Applicants are automatically eligible to receive weatherization assistance (pending the availability of funds) if they receive Supplemental Security Income or Aid to Families with Dependent Children. In other cases, states give preference to: • People over 60 years of age. • Families with one or more members with a disability. • Families with children (in most states).	Low-income families
Kentucky Power—Targeted Energy-Efficiency Program provides weatherization and energy-saving improvements to existing homes of income-eligible applicants. Kentucky Power provides funding for this program through the Kentucky Community Action network of community action agencies. Program services may include the following, as applicable and per program guidelines: • Energy audits. • Air infiltration diagnostic tests to find air leaks. • Air leakage sealing. • Attic, floor, and side-wall insulation. • Duct sealing and insulation. • High-efficiency lighting upgrades. • Domestic hot water heating insulation (electric). • Energy-efficient doors and windows. • Customer education on home energy efficiency.	Low-income families
Low-Income Home Energy Assistance Program is federally funded to help low-income families in managing costs associated with home energy bills, energy crises, weatherization, and energy-related minor home repairs. Interested households in Floyd County should contact BSACAP to apply.	Low-income families
HOME REPAIR ASSISTANCE	Eligibility
Kentucky Affordable Housing Trust Fund (AHTF) Home Repair Program provides up to $15,000 per home in funding assistance to stabilize the residences of low-income homeowners with essential repairs to keep or make the homes habitable. Assistance can be paired with other repair, weatherization, and energy	Low-income families; owner-occupied single-family and

efficiency programs. For more details. See 2024 AHTF Home Repair Program Policy Manual for more details.	manufactured homes
Weatherization Readiness Fund (WRF) is designated for use by states (Kentucky Housing Corporation, in this case) in addressing structural and health and safety issues of homes that are currently in the queue to be weatherized but are at risk of deferral. WRF can be used for addressing necessary repairs and improvements that must be completed before weatherization services can be implemented. Repairs and improvements may be associated with the building shell, drainage, plumbing, and electrical systems; they also may include clean-up and remediation for health and safety issues (e.g., lead paint, asbestos, mold, and moisture), which may otherwise prevent homes from qualifying for weatherization assistance.	Low-income dwellings that have been deferred for weatherization
UTILITY PROGRAMS	Eligibility
Columbia Gas of Kentucky—Low-Income Furnace Replacement Program provides rebates to low-income residential customers for a free replacement of an old, nonworking, or inefficient furnace with a high-efficiency model.	Low-income families
Big Sandy RECC—Together We Save program offers the following incentives to customers: 1. **Heat Pump Retrofit Program:** For electrically heated homes that are at least 2 years old. New manufactured homes also are eligible. Up to a $750 incentive for replacement of an existing heat source (must be an electric furnace, baseboard heat, or electric thermal storage) or ceiling cable heat with a high-efficiency heat pump. 2. **Button-Up Weatherization Program:** For electrically heated homes that are at least 2 years old. Up to a $750 rebate for making upgrades like air sealing or adding insulation to the ceiling. A home energy review, including an air leakage test, is required before and after the weatherization is performed. 3. **CARES:** For end-use members who qualify for weatherization and energy efficiency services through their local community action agency. Up to $2,000 per household incentive by the Community Action Kentucky agencies network. 4. **SimpleSaver Central Air Conditioner Program** and **Smart Thermostat Program** are designed to monitor and reduce electricity use during peak demand periods when energy costs are highest. Participants receive up to $20 annually for each central air conditioner they enroll and/or up to $10 per thermostat (up to two thermostats) by enrolling a qualifying Wi-Fi thermostat in the program. The program installs a remote switch to manage the central air-conditioning unit(s) and/or Wi-Fi-enabled smart thermostat for brief periods when demand reaches peak levels. (Learn more.)	Program-specific

TAX INCENTIVES	Eligibility
ENERGY STAR—Residential Energy Efficiency Tax Credits are available to owners of existing homes that will allow up to $3,200 annually to lower the cost of energy-efficient home upgrades by up to 30%. The qualified upgrades include ENERGY STAR water heaters, furnaces, boilers, heat pumps, air conditioners, and building envelope improvements, including duct/air sealing, building insulation, windows, doors, and roofs.	Owner-occupied homes
GREEN FINANCING LOANS	Eligibility
Fannie Mae Green Financing—Loan Program provides mortgage financing to apartment buildings and cooperatives (with five or more units) to finance energy and water efficiency property improvements, such as: • Upgrading to ENERGY STAR appliances. • Upgrading boilers. • Replacing inefficient lighting. • Installing solar systems. • Installing water-saving irrigation systems. • Improving insulation. • Making other energy- and water-saving improvements. To qualify, property owners must commit to property improvements that are projected to reduce the whole property's annual energy and/or water consumption by at least 30%, inclusive of at least a 15% energy consumption reduction.	Multifamily buildings

What steps and considerations should homeowners follow to identify qualifying home retrofit opportunities for which they are eligible?

4.2 STEPS FOR HOMEOWNERS TO IDENTIFY QUALIFYING HOME RETROFIT OPPORTUNITIES

To effectively identify qualifying home retrofit opportunities, homeowners should follow these essential steps and considerations:

1. **Conduct a Home Energy Assessment:** Homeowners can begin by conducting an initial assessment of their home's energy use, comfort, and safety. This assessment helps identify inefficiencies and areas of energy loss, enabling homeowners to determine whether professional services are necessary for improving energy efficiency and/or addressing health and safety concerns. For guidance on conducting an energy assessment, visit Do-It-Yourself Home Energy Assessments. For health and safety assessments, refer to the checklists provided in Section 3, Repairs and Health and Safety Upgrades.

2. **Research Local Programs and Eligibility Criteria:** Explore Section 4.1, Home Retrofit Services and Financial Incentives Opportunities for Floyd County Residents to find financial incentives and programs for professional home energy audits, energy retrofits, repairs, and health and safety upgrades available through local community action agencies, utility companies, and

state and local governments. Be sure to understand the eligibility requirements, which may include income limits and specific home types.

3. **Prepare Required Documentation:** Gather necessary documents, such as income statements, utility bills, and property information, because these may be required for application processes. Follow the instructions provided on resource websites and consider leveraging community resources for support and guidance during the preparation phase.

How can county organizations and home retrofit service providers help homeowners navigate these opportunities?

4.3 STRATEGIES TO HELP HOMEOWNERS NAVIGATE HOME RETROFIT OPPORTUNITIES

County organizations and home retrofit service providers can assist homeowners in navigating retrofit opportunities through several key strategies:

1. **Information Dissemination:** By providing clear, accessible information about available retrofitting programs, incentives, and funding sources, these organizations can help homeowners understand their options. This can be achieved through a variety of channels, including brochures, websites, social media, community events, and broadcasts.

2. **Resource Centers:** Establishing local resource centers creates a one-stop shop for homeowners seeking guidance on energy efficiency upgrades. These centers can offer informational materials and staff to answer questions and direct homeowners to relevant programs.

3. **Workshops and Training:** Organizing workshops tailored to various literacy levels can educate homeowners on the benefits of retrofitting and the specific processes involved in applying for financial assistance. These sessions can cover topics like energy-saving techniques, funding applications, and best practices for home improvement.

4. **Partnerships With Local Entities:** Collaborating with local nonprofits, utility companies, and government agencies can enhance outreach efforts and streamline access to resources. Joint initiatives can help create a network of support for homeowners, making it easier to obtain necessary information and assistance.

5. **Personalized Support and Consultations:** Offering one-on-one consultations can help homeowners identify their specific needs and navigate the available resources. Personalized guidance can include assessing home conditions and providing tailored recommendations for energy efficiency upgrades.

6. **Community Engagement:** Encouraging community involvement through events or forums can create a supportive environment where homeowners can share experiences and learn from each other, further enhancing their understanding of available retrofit options.

5. ALIGNING RETROFIT SUPPORT WITH GOALS AROUND RESILIENCE AND YOUTH AND WORKFORCE DEVELOPMENT

How can housing retrofits support goals related to climate resilience and youth and workforce development?

Several existing programs and organizational networks operating in Kentucky seek to further youth and workforce development initiatives that would extend to Floyd County, including BSACAP, Kentucky Career Center, TEK Center, and Shaping Our Appalachian Region (SOAR).

Although these organizations operate many programs, few focus exclusively on connecting workforce development goals with clean energy and resilience. Nonetheless, even programs that forego the application of a sustainability lens deliver tangential benefits due to the nature of professional skills and training they offer. A brief overview of these organizations and the applicable programs they manage is provided below.

1. BSACAP oversees three employment programs directed toward building professional capabilities and opportunities for low-income participants: The Workforce Innovation and Opportunity Act (WIOA) Adult and Dislocated Worker Program, the WIOA Opportunity Youth Program, and the Senior Community Services Employment Program. These programs target different groups and collectively offer low-income participants the chance to build customized skills, develop professional competencies, overcome barriers to employment, and obtain on-the-job training contracts.

2. The Kentucky Career Center supports programmatic efforts associated with WIOA to drive local workforce development in Kentucky through two youth programs that provide educational, apprenticeship, and on-the-job training opportunities. Although BSACAP and the Kentucky Career Center do not specifically tailor their efforts toward expanding careers in sustainability, the in-demand occupational training, professional education, and experience they provide address the needs of various industries, including those aligned with sustainability goals.

3. The TEK Center seeks to strengthen workforce development by creating educational pathways that launch sustainable careers for Eastern Kentucky communities. The center offers specialized training in a range of skilled trades, including heavy equipment operation, electrical work, industrial mechanics, plumbing, masonry, and welding.

4. SOAR is a nonprofit organization dedicated to driving growth across 54 Eastern Kentucky counties, including Floyd County, by enhancing economic and workforce development. This growth is achieved by forging new connections among stakeholders, including communities, business owners, and educational services, and constructing achievable, sustainable pathways for progress.

5. Most notably, in August 2024, the U.S. Economic Development Administration announced plans to award approximately $40 million to SOAR as funding for The Eastern Kentucky Runway Recompete Plan. This plan will target 12 counties, including Floyd County, in the Eastern Kentucky coalfields with the goal of narrowing that region's prime-age employment gap. The program's seven projects will connect new workers between the ages of 25 and 54 with in-depth guidance and support to integrate within remote work, clean energy technology and manufacturing, and health care opportunities.

What actions can be taken to evaluate the effectiveness of existing programs and proactively ensure that community members are being guided toward the most suitable resources?

Evaluating the efficacy of existing programs to establish prioritization of available resources and produce optimal guidance would require direct outreach to existing organizations, applicable alumni networks, or managing governmental agencies. Informational requests for data could include the following:

1. Data regarding program reach, including the number of participants and growth over time.

2. The percentage of program participants who secure related employment within a specified period (e.g., 6 months, 1 year) following program completion.

3. If available, longitudinal study information that tracks career progression and stability over time to evaluate whether employment is sustained.

4. Data communicating historical and planned engagement levels specifically within Floyd County.

Unresponsiveness from contacted entities could reflect a lack of data availability, internal resources, or program support.

What potential grants or technical assistance opportunities could help develop a program to support staffing or community engagement for energy efficiency projects?

Numerous grants offer funding that could be leveraged to attain this objective. The following list outlines these funding opportunities:

Federal Grant Programs

1. **Career Skills Training Grant Program:** Provides funding for nonprofit-led partnerships between industry and labor organizations to build and implement programs enabling students to obtain an industry-related certification to install energy-efficient building technologies. This program holds significant potential given its direct link to clean energy, weatherization, electrification, and similar initiatives.

2. **Industrial Training and Assessment Centers:** Focuses on advancing the clean energy and manufacturing workforce by awarding qualified small- to medium-sized manufacturers with grants of up to $300,000 per manufacturer, per quarterly funding round, at a 50% cost share.

3. **U.S. Department of Labor Building Pathways to Infrastructure Jobs Grant Program:** Funds public-private partnerships to develop, implement, and scale training programs to build a skilled workforce for infrastructure jobs. This includes manufacturing, information technology, and other occupations that support renewable energy, transportation, and broadband infrastructure sectors.

4. **Good Jobs in Clean Energy Prize:** Awards funds to encourage the creation of a robust workforce within the clean energy sector. It requires the formation of a coalition that includes at least one representative each from a labor organization, clean energy employer, community-based organization, public agency, and educational and workforce provider.

5. **Energy Auditor Training Grant Program:** Offers grants to support the training of workers in conducting energy audits and surveys for both commercial and residential buildings. This assists

building owners in obtaining information necessary to meet current and future energy demands and requirements.

Appalachian Regional Commission Programs

1. **Partnerships for Opportunity and Workforce and Economic Revitalization Initiative:** Assists communities affected by job losses in coal mining by funding projects that will leverage entrepreneurship, workforce development, and infrastructure to bolster re-employment opportunities. This can include projects geared toward providing technical assistance on topics including clean energy. In 2023, funding was awarded to organizations including TEK Center, SOAR, and Big Sandy Community and Technical College.

2. **Area Development Program:** Supports Appalachian communities in collaborating with state governments to design impactful investment opportunities, including workforce development, in alignment with the program's strategic plan. This plan includes a focus on expanding access to reliable, affordable, resilient, and energy-efficient utilities and infrastructure.

APPENDIX. ADDITIONAL RESOURCES

Demographics and Housing

Kentucky Office of Energy Policy's Energy Affordability Dashboard
Floyd County, Kentucky, Profile (U.S. Census Bureau)
DataUSA: Floyd County, Kentucky

Resources for Energy Efficiency and Health and Safety in Homes

Energy Saver Guide: Tips on Saving Money and Energy in Your Home
Energy Saver Fact Sheets
Energy Savings at Home, ENERGY STAR
Protect Indoor Air Quality in Your Home (U.S. Environmental Protection Agency)
Indoor Air Quality in Multifamily Housing (U.S. Environmental Protection Agency)