

Office of Energy Policy Grant Projects 2023

State Energy Program Funded Projects

The U.S. Department of Energy's State Energy Program (SEP) provides funding and technical assistance to states, territories and the District of Columbia to enhance energy security, advance state-led energy initiatives, and maximize the benefits of decreasing energy waste. This program emphasizes the state's role as the decision maker and administrator of program activities that are tailored to Kentucky's unique resources, capacity, and energy goals.

The Kentucky Energy and Environment Cabinet's Office of Energy Policy awards SEP funds to projects focused on energy efficiency and affordability, building for resilience, and energy education throughout the state.

The following organizations were recipients of SEP funding in 2022- 2023:

Mountain Association *Energy Audits Project*

Energy audits are the first step to reduce utility bills, thus freeing up money better spent on fulfilling an organization's mission. With support of Kentucky's State Energy Program funds, energy experts from the Mountain Association provide no-cost energy audits for addiction recovery centers, non-profits, and small businesses located in eastern Kentucky. The project also supports the Mountain Association's New Energy Entrepreneurs program to bring increased energy jobs and awareness to the region. The energy audits identify immediate, no cost, or low-cost changes that will achieve immediate energy savings, and explain how much to invest to maximize energy efficiency savings. To learn more about the Mountain Association, visit <https://mtassociation.org/>

Kentucky Habitat for Humanity *Energy Efficiency Housing Project*

The OEP's partnership with Kentucky Habitat for Humanity is part of a broader initiative to bring resilience and energy efficiency into Habitat built homes. Kentucky recognizes that many families in our state face a high energy burden (percentage of household income spent on energy bills) and there is a need for affordable housing that is also healthy and sustainable. The Energy Efficiency Housing Project provides opportunities for low-income families to lower monthly utility costs through energy efficiency measures including ENERGY STAR appliance and mechanical upgrades. The project is available to all 35 Habitat affiliates located in 51 Kentucky counties. <https://kyhabitat.org/>

Housing Development Alliance *Energy Efficient Housing Project*

Housing Development Alliance, Inc. (HDA) works to make homeownership a reality for low- and moderate-income families in one of the poorest areas of state. By building highly energy efficient homes, the affordability and sustainability of the home is greatly increased. The work done by HDA provides on-the-job training for contractors and promotes understanding of how energy efficiency contributes to home affordability in southeastern Kentucky. State Energy Program grant funds provides for ENERGY STAR ratings of new homes certifying that they are extremely energy efficient, and provides rebates on Energy Star rated heat pumps required for that certification. <https://hdahome.org/>

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National Energy Education Development *Energy Education Project*

Kentucky Office of Energy Policy supports our state chapter of the National Energy Education Development (NEED) Project. NEED promotes energy education throughout the Commonwealth, ensuring students have a realistic understanding of energy, improved STEM (Science, Technology, Engineering, and Math) skills, and are ready to be a part of the workforce of the future. This program allows students to complete a hands-on energy project while exploring the science of energy, and explores how efficiency and conservation measures positively influence the home environment. Lessons also cover solar curriculum, baseload balance, energy storage unit, transportation units, and an energy careers section.

School districts all across the state will be pre-selected to ensure a balance of schools from high-energy burden communities and Title 1 schools. NEED will offer 4 in person workshops for teachers, and will also hosts virtual professional development training, enabling teachers from all regions of the state to attend. Teachers receive Professional Development training hours for these workshops.

Finally, NEED hosts the Kentucky Youth Awards for Energy Achievement. The event is hosted annually in April for schools and student organizations to showcase their energy projects and to learn about energy careers and programs from a variety of Kentucky mentors, leaders, and volunteers. Students excelling in the Kentucky Youth Awards are invited, with some scholarship support, to attend the annual NEED Youth Energy Conference and Awards in Washington, D.C. each June.

Visit the NEED Website to learn more: <https://www.need.org/>

KY Rural Water Finance Corporation *Energy Resilience for Wastewater Facilities*

The overall goal of the project is to minimize water outages and enhance energy resilience by making water and wastewater facilities auxiliary power ready through the installation of manual generator switchgear.

Drinking water outages closely follow the loss of power which quickly complicates emergency response efforts for critical customers such as health care facilities. This can be easily offset by auxiliary power that allows for a quick and safe connection to a generator. The inability of a utility to connect to auxiliary power extends the water outage, creates more bottled water demand, and increases the likelihood of evacuating critical facilities.

To learn more visit: <https://www.krwa.org/interim-loan-program>

Goodwill Industries of KY *Energy Efficient Housing Project*

This is a statewide project with the primary goal of exploring the relationship between energy burden and social, economic, and environmental factors. The final output will be an interactive that can act as a fact based printable reference document that can be used to inform decision makers on energy burden in Kentucky. Additionally, a one-pager with key facts will also be produced.

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Bluegrass Greensource *Energy Education Project*

Bluegrass Greensource (BGGs), an environmental non-profit organization, provides energy-related education programs for families and pre-school students in central Kentucky. BGGs, through state energy program funding, developed a successful Preschool Energy Curriculum for Central Kentucky and an additional 30 preschool classrooms now have access to this innovative, hands-on curriculum for young learners. Expanded community-focused outreach and marketing efforts offer additional ways to access web-based energy-efficiency resources, locate workshops, educational videos, and home energy projects. BGGs partnered with community organizations to host six Family Energy Education events to engage residents in hands-on activities about basic energy concepts, reducing energy use, and home energy costs.

This project provides educational sessions on how to have a healthier, more comfortable, and more energy-efficient home. Throughout the 2022-2023 program year, up to 250 households participated in educational workshops where they received resources including a free energy efficiency kit. These workshops target low income and disadvantaged communities, including families where English is a second language.

To learn more and to register for one of the state energy program workshops visit:
<https://bggreensource.org/home-energy-workshops/>

University of Kentucky Center for Applied Energy Research *GEN EV*

The University of Kentucky (UK) Center for Applied Energy Research (CAER), in partnership with GreenpowerUSA and the Kentucky Energy and Environment Cabinet, have created a program to advance STEM (science, technology, engineering, and math) education in Kentucky's schools. This program, officially called STEM Education through Electric Vehicles, is nicknamed "GEN EV" – for Generation Electric Vehicles. GEN EV offers Kentucky's next generation of students the opportunity to design, construct, and competitively race a one-person electric vehicle.

Currently, there are 19 elementary schools participating in this program. Teachers at these schools received curriculum training and instruction on vehicle construction and operation. Planning is underway to expand the program to middle and high school levels.

Grant funding provides schools with stipends to assist with teacher training session attendance and curriculum implementation. Schools also receive the GreenpowerUSA program kit which includes curriculum materials, the vehicle base, and associated parts. Students develop their team program and assemble their vehicles in preparation for a competitive race held each spring.

This program is funded in part through Kentucky's State Energy Program.

To learn more, watch https://youtu.be/d_8Xi_tHJSA or visit <https://caer.uky.edu/outreach/>