

# 2021 CAIP Investment Area Guidelines: ON-FARM ENERGY



*These guidelines represent one of 11 investment areas within the County Agricultural Investment Program (CAIP) to provide Kentucky agricultural producers cost-share assistance on practices that increase net farm income and opportunities to try new/innovative technologies or systems that improve farm efficiency and productivity.*

Funded participants shall adhere to all local, state, and federal rules and regulations.

## Investment Area Prerequisites

- Applicants are required to provide a detailed listing and verification of all expenditures related to this investment area. In addition to the normal documentation, the applicant may be required to provide model and serial numbers for all relevant components, as well as further explanation of the energy related benefits of the investment.
- The local Administrative Entity in consultation with GOAP Staff can at their discretion disqualify the reimbursement of expenditures not explicitly listed above or for items determined to provide no energy savings.
- Dairy applicants shall be permitted by the Kentucky Milk Safety Branch.

## A. Upgrades to all Applicable Farms

1. New installation of, or conversion to Energy Efficient Grain Drying Systems with suggested improvements such as:
  - a. Addition of recirculation of cooling section exhaust air
  - b. New dryers with increased column width
  - c. Implementation of dryeration
  - d. Addition of in-bin cooling
2. Milk cooler tank and milk pre-cooler
3. Automatic milker takeoffs
4. Variable speed drives for vacuum pumps
5. Heat recovery from refrigeration equipment
6. Scroll compressor
7. Timers for tractor engine block heaters
8. Energy free or low energy waterers
9. NEMA labeled Premium Efficiency motors
10. Low pressure irrigation systems, conversion from Sprinkler to Drip irrigation, or Variable Frequency Drives for well pumps
11. Renovation expenditures recommended by a previously completed energy audit or energy assessment may be considered
12. Installation expenses of above items when performed by a hired contractor and documented by invoices and cancelled checks

## B. Energy Efficient Building Components & Renewable Energy Projects

1. *Energy Star*, CFL, Cold Cathode, T-8, T-5, LED, or High Intensity Discharge (HID) lights and lighting fixtures
2. Insulation
3. Programmable thermostats and controllers
4. High Volume Low Speed (HVLS) fans, energy efficient Low Volume High Speed Exhaust or Circulation fans (The BESS lab at the University of Illinois rates exhaust fans)
5. *Energy Star* windows, doors, skylights, roofing, or other *Energy Star* building components
6. Cool Roof system
7. Tankless, solar, or water heaters with a thermal efficiency of at least 90%
8. EPA approved waste oil or biomass fired boilers, hydronic furnaces, heaters and stoves
9. Renovation expenditures recommended by a previously completed energy audit or energy assessment may be considered
10. Installation expenses of above items when performed by a hired contractor and documented by invoices and cancelled checks
11. Solar powered watering system for agricultural use. Documentation from a third-party service provider, verifying water use, is required with application.
12. Equipment, structure or other supplies necessary to harness available solar

## C. Professional Fees and Training

1. Documented expenses not covered by other programs for the completion of an on-farm energy audit or assessment
2. Third party professional fees associated with the completion of a grant application within a United States Department of Agriculture, United States Department of Energy, or other non Kentucky Agricultural Development Fund program related to on-farm energy efficiency or renewable energy production

Executive Summary of completed application and verification of its submission to the appropriate program must be submitted with documented expenses.

3. Third party professional fees for environmental, technical, geological, biological, engineering, and chemical consultation associated with the development of projects in the area of On-Farm Energy Efficiency and Production
4. Registration fees for the attendance of workshops and conferences focusing on the area of On-Farm Energy Efficiency and Production

***IMPORTANT:*** Applicants with projects requiring over \$50,000 in expenditures or projects likely to be submitted for consideration for federal programs, should consider requesting funds for a professional energy audit. Eligibility criteria for other federal programs will likely have more stringent requirements. Resumes confirming the qualifications of all third party professionals listed above and performing services for a fee must be attached with submission of the documented expenditures.

## D. Biomass Energy Crop Production

1. Seed, rootstock, or other plant material used to establish a dedicated biomass energy crop
2. Limestone based on a soil test taken within the past 12 months and prior to lime application
3. Specialized equipment, structures, and other supplies not currently owned by the applicant that are essential for the production, harvesting, and or transportation of biomass energy crops (excluding trailers and wagons)
4. Hired services needed for the production, harvesting, and/or transportation of biomass energy crops

***IMPORTANT:*** Only farm level costs for projects under the supervision of Universities or other entities conducting valid research, demonstrating production techniques, or utilizing the biomass crops for energy production will be considered.

## E. Equipment and Infrastructure for On-Farm Energy Production

1. Equipment, structures, or other supplies necessary to convert animal waste into useable energy
2. Equipment, structures, or other supplies necessary to connect an on-farm electric power generator fueled by renewable fuels to the electric power utility's distribution system
3. Equipment, structures, or other supplies necessary to retrofit existing oil or gas wells to which the farmer/applicant owns the mineral rights and can utilize the fuel within their farming operation
4. Equipment, structures, or other supplies necessary to convert biomass crops into useable energy
5. Equipment, structures, or other supplies necessary to convert grains and oilseeds into ethanol or biodiesel
6. Fuel testing services and kits needed to monitor fuel quality
7. Equipment, structures, or other supplies necessary to harness available solar, wind, geothermal, or other renewable sources of energy

***IMPORTANT:*** Due to the array of local, state, and federal taxes, any fuels produced on the farm with assistance through this program cannot be utilized as transportation fuels for highway use. Applicants are encouraged to review all manufacturers' warranties and specifications before using the fuels in any equipment.

### **Exclusions / Limitations:**

- Eligible items will be restricted to components of buildings used solely for farming purposes.
- Improvements to personal residences, non-farm commercial property, and any other non-farm structures are not eligible.
- Tractors, motorized vehicles, and other equipment with internal combustion engines are excluded from this investment area.