

## Energy Audits of Agricultural Operations

Agriculture faces rising energy costs, regardless of whether the energy is direct (energy derived directly from a power source, such as electricity or diesel, and consumed for a particular use such as heating, lighting, or transportation) or embedded (energy used for production, packaging, and transportation that is 'captured' in fertilizers and pesticides). Through CSP, USDA's Natural Resources Conservation Service (NRCS) is encouraging farmers and ranchers to review how they use energy in their operations and look for ways to reduce costs, improve energy efficiency, and reduce impacts on the environment. An energy audit is the first step in energy management. Operators need to know how much energy is being used and where it is being used before changes in efficiency can be measured. Once energy consumption and costs have been measured, users can perform a variety of analyses to determine which actions are most efficient, and take steps to make changes where necessary.



**Definition** – An energy audit identifies and evaluates energy management opportunities on the farm or ranch. During an audit, a baseline is developed to characterize and record on-farm energy use. Individual unit operations, processes, and major energy-consuming equipment are evaluated to identify energy management opportunities and high-return-on-investment projects. An action report is produced that describes the baseline, each major conservation opportunity area, an estimate of the cost to implement the changes, the potential savings that will be generated, and an estimation of the payback period. Additional information on farm energy audits is covered in the CSP Information Sheet, **Energy Audit Guidance**. At a minimum, farm energy audits for CSP must identify baseline usage for non-residential structures and all stationary equipment used in farming operations. Vehicles and the farmstead are currently excluded.

**Who Performs Energy Audits?** – Farmers and ranchers interested in receiving an enhancement payment for an energy audit must hire a professionally qualified energy auditor or utility of their choice to conduct the audit. Operators should ensure that the auditor has relevant educational and professional experience, a successful track record in energy auditing, can provide objective advice, has declared any financial relationships with equipment vendors or service companies, and has qualified staff. NRCS can provide assistance in identifying qualified energy auditors.

**Baseline Self Assessments** – In some areas contractors or utilities are not readily available to perform energy audits on farms. A self-assessment worksheet is being developed for areas with limited access to energy audits. The worksheet will help

producers establish a baseline energy usage and identify proposed energy savings activities. The baseline self-assessment documents current energy use and may be used to document energy savings over the life of the CSP contract. Payments will **not** be made for baseline self assessments, themselves, however. Additional guidance on the baseline self-assessment is covered in the ***CSP Energy Enhancement Energy Assessment Work Sheet***.

CSP Payment: A one-time CSP Enhancement payment is offered to farmers who obtain a professional farm energy audit.

Documentation Required: A receipt from the professional energy auditor is required prior for payment approval for the farm energy audit enhancement. To establish a baseline assessment, a summary page from the farm energy audit or a signed copy of the baseline self-assessment worksheet will be required.