

# Headquarters Agricultural Energy Management Plan Criteria Practice/Activity Code (122) (No.)

## 1. Definition

A Headquarters Agricultural Energy Management Plan (Headquarters AgEMP) contains the strategy by which the producer will explore and address his/her on-farm energy problems and opportunities.

## 2. Headquarters AgEMP Criteria:

This section establishes the minimum criteria to be addressed in the development of AgEMP.

### A. General Criteria

1. A Headquarters AgEMP shall be developed by certified Technical Service Providers (TSPs). In accordance with Section 1240 (A), the Environmental Quality Incentives Program (EQIP) program provides funding support through contracts with eligible producers to obtain services of certified TSPs for development of a Headquarters AgEMPs. The specific TSP criteria required for the Headquarters AgEMP development is located on the TSP registry (TechReg) web site at: <http://techreg.usda.gov/>

### B. The Headquarters AgEMP plan shall address and document the following elements:

1. Background and site information;
2. Energy audit for the Headquarters' Operation
3. Energy conservation practices planned;
4. Reference documents.

### C. Headquarters AgEMP Element Specific Criteria

1. The Headquarters AgEMP will address specific elements. The Headquarters Audit will meet the Type 2 Audit minimum criteria established in the *ANSI/ASABE S612 July2009 Performing On-farm Energy Audits* standard. The degree to which these elements are addressed in the development and implementation of a site-specific Headquarters AgEMP is determined by the General Criteria in Section A and the specific criteria provided for each element of the Headquarters AgEMP are identified below.
2. Background and Site Information - This element provides a brief description of:
  - a. Name of producer
  - b. Facility location(s) and mailing address
  - c. Type and size of the operation
  - d. Producer concerns
3. On-farm Energy Audit: This element determines and documents current energy usage, over the past annual cycle, and provides cost-effective alternatives and

recommendations for energy conservation of each farm enterprise. The evaluation of energy conservation activities shall include energy used in the processing and storage of agricultural crops, feeding, housing, and processing of farm animals and animal products.

4. Definitions:
  - a. Energy: Fuels (purchased propane, diesel and natural gas) and electricity used to perform stationary farm and ranch activities. This definition includes renewable energy sources.
  - b. Energy Auditor: A person who has the technical qualifications to perform an agricultural energy audit.
  - c. Energy Source: The type of fuel (liquid or gas), electricity or renewable power used to perform farm and ranch activities.
  - d. Current Energy Usage: The annual usage of grid electricity and/or natural gas and purchased fuels (liquid or gas) for stationary farm or ranch operations.
5. Criteria for Headquarters Energy Audit - The Energy Audit is to be tailored to the individual farm and should cover the primary energy users such as irrigation pumping, heating and cooling of livestock production facilities, manure collection and transfer, grain drying and similar common on-farm activities.
  - a. Current energy usage – describe activity and primary equipment involved with each headquarters operation.
  - b. Recommended energy improvements and estimated cost.
  - c. Expected energy savings from these improvements and estimated payback period in years.
  - d. Document the type of energy resource used and current energy consumption by each major activity at the farm headquarters.
  - e. Describe components of the major activities:
    - Manufacturer
    - Equipment component factory ratings (HP, efficiency, BTU use)
    - Management use efficiencies (ex. manual/automatic controls)
    - Estimated annual energy use
  - f. Summary of energy use by energy resource
  - g. Assessment - Alternatives Development
  - h. Describe the planned energy saving actions
  - i. Document energy savings for the major activities at the farm headquarters as BTU's, KW hours, etc. Document a simple payback period (in years) for the proposed changes.
7. Conservation plan (record of decisions) (*Utilizing Customer Service Toolkit – Plug-In or MsWord Document*) conservation practices and measures taken to reduce energy to address the energy management needs for the “Headquarters

AgEMP”. The record of decisions shall include the measures taken to reduce energy consumption, planned practice, schedule for implementation, and site specific specifications to apply the conservation practice. The site specific specifications can be on an NRCS Jobsheet available for the conservation practice or in a narrative form for the non-engineering type practices. Planned engineering type practices shall include the conservation practice and schedule of implementation. The plan may include, but is not limited to the conservation practices listed below and measures taken to reduce energy consumption:

- (a) Anaerobic Digester (366)
- (b) Composting Facility (317)
- (c) Irrigation System, Microirrigation (441)
- (d) Irrigation System, Sprinkler (442)
- (e) Irrigation Water Management (449)
- (f) Pipeline (516)
- (g) Pumping Plant (533)
- (h) Solid/Liquid Waste Separation Facility (632)
- (i) Waste Transfer (634)
- (j) Watering Facility (614)

8. References: This element lists the technical documentation sources used for the Headquarters AgEMP and may include the actual documents or web sites that contain the technical documentation useful for the producer.

9. **Deliverables for the Client – a hardcopy of the plan that includes:**

- Cover page – name, address, phone of client and TSP; Total Acres of the Plan, signature blocks for the TSP, producer, and a signature block for the NRCS acceptance.
- The completed energy audit report will include the following sections:
  - a. Summary of the facility’s location, production level, any unusual factors that affect energy use, and any energy efficiency measures already in use.
  - b. Summary of the site’s energy use over one year, broken down by type of usage and month.
  - c. Summary of how much money the producer would save if the recommended measures were included, and how much money the producer would lose if no action were taken.
  - d. A list of recommended measures to reduce energy use including their annual energy (kWh, propane, fuel oil, BTU,...) savings and an estimated payback in years.

- e. A narrative summary of the recommendations made through the audit including description of technology, how the technology would affect the site, and how much energy would be saved annually by installing the equipment.
- For engineering/structural practices. The planned practice when it will be applied and extent, and located on the conservation plan map.

**2. Deliverables for NRCS Field Office:**

- Complete Hardcopy and Electronic copy of the producer's plan (MsWord copy).