United States Department of Agriculture
Natural Resources Conservation Service

Date Received: **Control No:**

Field Office Checklist and TSP Certification Sample Plan Review

Agricultural Energy Management Plan, Headquarters
Conservation Activity Code (122)
(Refer to National Bulletin 450-12-2 for a complete listing of CAP Criteria)

Purpose: The purpose of this checklist is to provide guidance for contents that need to be addressed or included in an Agricultural Energy Management Plan, Headquarters (AgEMP). This checklist is designed for use by NRCS and Technical Service Providers. Please refer to the AgEMP 122 Criteria for specific elements to be addressed.
Instructions: The AgEMP sample plan must be reviewed by NRCS National Headquarters. Please submit this completed checklist and sample plan by mail or email to Tim Pilkowski, Natural Resources Specialist, TSP Team. See below for address info.

Agricultural Energy Management Plan, Headquarters	
State/County:	**Date Plan Submitted:**
Producer/Owner:	**Technical Service Provider:**

Definition: An Agricultural Energy Management Plan - Headquarters (AgEMP) is a detailed documentation of energy consuming components and practices of the current operation, the previous year's on-farm energy consumption, and the strategy by which the producer will explore and address their on-farm energy conservation concerns, objectives, and opportunities.

Minimum components of a Headquarters AgEMP (122) shall include:

A.	**General AgEMP Headquarters Criteria:**
	An AgEMP - Headquarters shall be developed by a certified Technical Service Provider (TSP). In accordance with Section 1240 (A) of the 2008 Farm Bill, the Environmental Quality Incentives Program (EQIP) provides funding support through contracts with eligible producers to obtain services of certified TSPs for development of an AgEMP- Headquarters. The TSP proficiency criteria required to develop an AgEMP - Headquarters for an EQIP eligible producer is located on the TSP registry (TechReg) web site at: http://techreg.usda.gov/
B.	**Criteria for Specific Elements of an AgEMP Headquarters:**
1.	The AgEMP - Headquarters will meet the Type 2 on-farm energy audit minimum criteria established in the ANSI/ASABE S612 July2009 Performing On-farm Energy Audits standard, hereafter referred to as the industry standard.
2.	**Background and Site Information –** The AgEMP will provide a narrative for:
☐	a. Name of producer
☐	b. Facility location(s)
☐	c. Type and size of the operation (e.g., description of the poultry, dairy, or swine, etc. as well as production levels, and any unusual factors that affect energy use)
☐	d. Producer concerns, objectives, opportunities, and overall management scheme for the enterprise (i.e., description of why the producer wants an on-farm energy audit

	and their specific objectives)
3.	**Documentation of Baseline Current Energy Use:** The AgEMP will provide comprehensive documentation of the current energy resources (e.g., electricity, natural gas, etc.) used for all of a producers farming enterprises, respective total current energy usage, and total cost data.
☐	This will also be broken down by major activity per month over the past annual cycle.
☐	The evaluation of current energy use shall address major activities listed in (but not limited to) the industry standard associated with the processing and storage of agricultural commodities, feeding, housing, processing of farm animals, and animal products.
☐	Current energy use for stationary engine driven equipment used in the cultivation, protection, and harvesting of agricultural commodities will also be evaluated as applicable.
☐	A comprehensive summary of all of the above items will be presented by energy resource.
ALSO	In addition to the above comprehensive farm energy baseline, the AgEMP will document the major activities associated with each of the individual farm enterprises:
☐	a. Components/details of the major activities, as appropriate, and primary equipment: • Manufacturer of equipment, • Equipment component factory ratings (hp, efficiency, BTU input and BTU output) • Management use efficiencies (eg. manual/automatic systems)
☐	b. Annual energy use
NOTE	If a major activity is not applicable to the farm enterprise or the major activity has no opportunities for improved energy use, the report needs to state this.
4.	**Recommended Measures/Conservation Practices:** The AgEMP will provide appropriate energy savings for each major activity (including a comparison to the baseline energy use) that reduces energy use and addresses the energy management needs for the agricultural operation (see ASABE S612 Table 1).
☐	a. The Recommended Measures for energy improvement are to be presented.
☐	b. Estimated energy savings are to be presented. Energy savings shall be documented for the major activities at the farm headquarters as kWh, joules, gallons, etc. and shall also be converted to a common measure of millions of British Thermal Units (mBTU).
☐	c. Estimated installed cost and energy cost savings in years are to be presented
☐	d. Simple payback period (in years) shall be documented for each of the recommended energy improvement measures.
☐	e. Estimated emissions reductions based on energy savings (specific estimates for CO_2, N_2O, CH_4, SO_2, and NO_x) are to be provided for each recommended energy improvement/measure.
☐	f. The plan may include, but is not limited to, the conservation practices listed below: • Farmstead Energy Improvement (374) • Irrigation System, Micro-irrigation (441) • Irrigation System, Sprinkler (442) • Irrigation Water Management (449) • Pumping Plant (533)

☐	g. The plan may include, but is not limited to the following recommended energy improvement measures: Lamps, timers, sensors, fans, control systems, variable drives, compressors, motors, insulation, heaters, waterers, evaporator/chillers, planting, tilling, harvesting, engine driven equipment. (Refer to Table 1 in the ASABE S612 industry standard, for more information on the components listed for each of the major energy activity categories)
5.	**Summary Reporting of Recommended Measures**: The following Tables 1 and 2 and their formats must be provided at the beginning of the AgEMP report. The Summary Table 1 (shown below) will contain each of the various recommended measures, prioritized according to pay-back period.
☐	a. Estimated reduction in energy use (electricity, propane, other), estimated energy savings, estimated installation cost, estimated energy cost savings, estimated greenhouse gases and air pollutant co-benefits will be provided for each energy improvement/recommended measure.
☐	b. The Payback in Years column determines the sequence in which recommended measures are to be listed in the Summary Table. This sequence can be used to provide guidance on the recommended sequence of implementation, from shortest time of payback to longest time of payback.
☐	c. Recommended measures with payback periods exceeding 10 years may be presented in the body of the report but shall not be included in the Summary of Recommendations.
☐	d. Guidance on how to calculate the estimated greenhouse gases and estimated air pollutant co-benefit is provided in Appendix A.

Table 1. Summary of Estimated Annual Energy Efficiency Improvements

	Estimated Reduction in Energy Use				**Estimated Costs, Savings, Payback, and Prioritization for Implementation**			**Environmental Benefits**				
								Greenhouse Gases			**Air Pollutant Co-Benefits 1/**	
Recommended Measure	Electric Savings (kWh)	Propane Savings (Gal)	Other 2/	Energy Savings 1/ (mBTU)	Installed Cost [a]	Energy Cost Savings [b]	Payback in Years [a / b]	Estimated CO2 (lbs)	Estimated N2O (lbs)	Estimated CH4 (lbs)	Estimated SO2 (lbs)	Estimated NOx (lbs)
Totals												

Table 1 Notes:

1) SO_2 and NOx are ambient air contaminants; CO_2 is a green house gas.

2)Other: Gasoline, Diesel fuel, Natural Gas

Energy Savings as a percent of total energy use must also be presented for each energy type in Table 2 format (as shown below).

Table 2. Energy Savings of Recommendations

Fuel	Current Usage	MBTU Usage	Savings	MBtu Savings	% Savings
Electricity (kWh)					
Natural Gas (ccf)					
Totals					

6.	**References**: The AgEMP shall include technical documentation of sources used for the Headquarters AgEMP. Include the actual documents or web sites that contain the technical documentation useful for the producer such as:
☐	Fact sheets, product information, recommendations and/or comparisons of specific products, journal articles, manufacturer product information sheets, etc.
7.	**Deliverables for the Client:** a hardcopy of the AgEMP report shall include:
☐	a. An Agricultural Energy Management Plan Checklist with all items checked that are contained in the Plan report.
☐	b. The Cover page of the AgEMP will contain the following: • Name and address of producer and TSP • Date AgEMP was performed • Signature blocks for the TSP and producer • Signature and date block for the NRCS Field Office concurrence.
8.	**Deliverables for NRCS Field Office**:
☐	Complete electronic copy or hard copy (MS Word) of the completed AgEMP Headquarters report.

Yes	No	Checklist Approval	
		I have reviewed this Agricultural Energy Management Plan – Headquarters, and it meets all the criteria of the Conservation Activity Plan 122 in accordance with Section 2508 of the Food, Conservation and Energy Act of 2008.	
NRCS Representative Name and Title (print or type):			
NRCS Representative Signature			Date:

Notes (If “No” is checked, include reasons for denial, comments, missing items that need to be added, etc.):

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