United States Department of Agriculture
Natural Resources Conservation Service

Date Received: _____ **Contract No:** _____

Agricultural Energy Management Plan Review Checklist
Conservation Activity Code 128

Purpose: This checklist provides guidance for NRCS and Technical Service Providers as a review of the contents that should be included in an Agricultural Energy Management Plan, (AgEMP). Please refer to the CAP128 AgEMP Criteria for specific elements to be addressed.

Agricultural Energy Management Plan	
State/County:	**Date Plan Submitted:**
Producer/Owner:	**Technical Service Provider:**
Definition: An Agricultural Energy Management Plan (AgEMP) is a detailed inventory of the energy consuming activities and components of the current agricultural operation based on a typical year as a baseline with recommendations for specific energy efficiency improvements.	

Minimum components of an AgEMP (128) shall include:

A.	**General AgEMP Criteria**
☐	**An AgEMP** shall be developed by a certified Technical Service Provider (TSP). The AgEMP will meet the Type 2 on-farm energy audit minimum criteria established in the ANSI/ASABE S612 standard *Performing On-farm Energy Audits* (July 2009), hereafter referred to as the industry standard.
B.	**Criteria for Specific Elements of an AgEMP**
1	**Cover page**:
☐	a. Farm name, owner name, address, county and state. Phone number of producer.
☐	b. Primary enterprise of the farm, and any other enterprises present on that farm
☐	c. TSP name, mailing address, email, and primary phone number.
☐	d. Date field visit was completed and date of plan delivery to the producer.
2	**Summary Reporting of Recommended Measures -** The following Tables 1 Summary of Energy Efficiency Improvements, Table 2 Energy Savings of Recommendations, and Table 3 Environmental Benefits, as formatted below must be provided near the beginning of the AgEMP report.
☐	**Table 1** with each of the recommended measures, prioritized according to payback period. Measures with pay back periods exceeding the life of the practice or 10 years, may be presented in the body of the report but shall not be included in the Summary.
☐	**Table 2** Estimated reduction in energy use (electricity, propane, other), estimated energy savings, estimated installation cost, estimated energy cost savings,
☐	**Table 3** Estimated greenhouse gases and estimated air pollutant reductions for each **r**ecommended measure in Table 1.

Table 1. Summary of Energy Efficiency Improvements

		Estimated Reduction in Energy Use	**Estimated Costs, Savings, Payback, and Prioritization for Implementation**

Recommended Measure[1]	Electric Savings (kWh)	Natural Gas Savings (ccf)	Propane Savings (gal)	Other[1]	Energy Savings (MMBTU)	Installed Cost [a]	Energy Cost Savings [b]	Payback in Years [a / b]	Est. Life in Years[2]
Totals									

1) Use the *Other* column to aggregate any miscellaneous sources of energy.
2) Estimated Life is expected useful life of the equipment recommended with standard O&M activities.

Table 2. Energy Savings of Recommendations

Fuel	Current Usage	MMBtu Usage	Savings	MMBtu	% Savings
Electricity (kWh)					
Natural Gas (ccf)					
Propane (gal)					
Other					
Totals					

Table 3: Estimated Annual Reduction of Pollutants. (Environmental benefits for each recommended measure.)

Environmental Benefits[1]						
		Greenhouse Gases[2]			Air Pollutant Co-Benefits[2]	
Recommended Measure	Energy Savings (MMBtu)	Estimated CO_2 (lbs)	Estimated N_2O (lbs)	Estimated CH_4 (lbs)	Estimated SO_2 (lbs)	Estimated NOx (lbs)
Totals:						

1) Environmental Benefits values may be calculate from http://cometfarm.nrel.colostate.edu/QuickEnergy
2) CO_2 is a green-house gas; SO_2 and NOx are ambient air contaminants

NOTE	In addition to the above comprehensive farm energy baseline, the AgEMP will document the major activities associated with each of the individual farm enterprises. 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.
3	**Background and Site Information –**The AgEMP will provide a narrative for
☐	a. Facility location, enterprises found on the farm that consume significant amounts of energy.
☐	b. Description of type and size of the operation and overall management scheme (specify livestock management, production levels, and any unusual factors that affect energy use).
☐	c. Producer concerns, objectives, and opportunities.
☐	d. An aerial map or equivalent drawing indicating the locations of the farm operation, including all the structures associated with the AgEMP.
4	**Equipment and Baseline Energy Use–**comprehensive documentation of the current energy resources (e.g. electricity, natural gas, etc.) used for all of the producers farming enterprises, and total cost data.
☐	Summary of each enterprise and major activity by energy source over the past annual cycle used for the baseline (see ANSI/ASABE S612 Table 1 Suggested Components within Major Activities by Farm Enterprises for Audit Assessment).
☐	a. Components/details of the major activities, as appropriate, and primary equipment: • Manufacturer of equipment, type and size. • Equipment component factory ratings (hp, efficiency, BTU input and BTU output) • Auxiliary items to enhance management such as thermostats, timers, manual overrides of automatic systems.
☐	b. Annual energy use for each activity separated by energy source and estimated annual hours of operation for each component.

☐	c. Explanation of major activities not applicable to the farm enterprise, or which have no opportunities for improved energy use. (Note: Cultural Practices are not a required major activity for evaluation in a CAP128 and does not need to be identified.)
5	**Recommended Improvement Measures/Conservation Practices:** For each recommended measure that reduces energy use and addresses the energy management needs for the agricultural operation:
☐	a. Estimated energy savings documented for the major activities in typical common units (kWh, joules, gallons, etc.) and converted to a common measure of millions of British Thermal Units (MMBTU).
☐	b. Estimated installed cost for each recommended measure. Use non-discounted prices for installation cost and for calculating the payback period. Do not include cost share or other energy rebates in the installation cost.
☐	c. Estimated annual energy cost savings for each measure
☐	d. Simple payback period (in years) shall be documented for each of the recommended energy improvement measures and arranged in order of shortest payback period to longest.
☐	e. Estimate of the lifespan in years of the recommended measure.
☐	f. Estimated emissions reductions by each recommended energy improvement should be provided.
6	**Signature Page**
☐	• Farm name, owner name, street address, and county. • Primary enterprise of the farm, and any other associated enterprises that were analyzed. • Signature and date block for the producer acceptance of the document. • TSP certification statement to the effect that the auditor possesses the technical expertise and experience to perform on-farm energy audits and that the report meets all the requirements of ANSI/ASABE S612 and NRCS CAP 128. • TSP signature and date blocks.
☐	• Producer acceptance statement • Signature and date block for producer acceptance
☐	• Signature and date block for the NRCS Field Office concurrence.
7	**References -** Technical documentation of sources used for the AgEMP. Include the actual documents or web sites that contain the technical documentation useful for the producer:
☐	• Fact sheets • Existing product information • Recommendations and/or comparisons of specific products • Journal articles • Manufacturer product information sheets, etc.
Deliverables for NRCS Field Office	
☐	Complete electronic or hard copy of the completed AgEMP report with original signatures.

Yes	No	NRCS Checklist Approval
☐	☐	I have reviewed this Agricultural Energy Management Plan, and it meets all the criteria of the Conservation Activity Plan 128 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 detailed reasons for denial, comments, missing items that need to be added, etc.):		