

Lighting System Improvement (670) Requirement Sheet

2016 Environmental Quality Incentives Program (EQIP)

Tennessee

Definition: Development and implementation of improvements to reduce, or improve the energy efficiency of on-farm energy use.

Eligibility: Non-residential structures and energy using systems where reducing energy use is the identified goal.

Purpose: This practice may be applied as part of a conservation management system to reduce energy use.

Requirements: Equipment and material installed for this practice shall be in conformance with the energy audit completed through Conservation Activity 122, 124, 128 and/or ASABE Standard S612, Performing On-Farm Energy Audits.

Other items include:

- Work performed shall conform to all applicable standards, codes, laws and regulations.
- Satisfy Plan and Specification requirements set forth in Practice Standard 670, August 2013 as well as the approved Energy Audit.
- Comply with NRCS-TN Specification 670, March 2015. (See attached Specification 670)

Scenario Eligibility: Only practices that are recommended for energy savings in the Energy Audit are eligible for implementation.

Operation and Maintenance: An operation and maintenance plan shall be developed that is consistent with the purposes of this practice, its intended life, and safety requirements. (See EFOTG for O & M Plan).

Producer requirements for payment: Install practice according NRCS standards specifications and requirements. Payment is made following certification by appropriate NRCS staff with engineering job approval authority or acceptance by NRCS staff that all required items have been performed and appropriate submittals have been obtained.

Attachments: 670 Specifications

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION
Lighting System Improvement
CODE 670

1. SCOPE

This specification sets forth requirements needed for implementation of Lighting System Improvements.

2. EQUIPMENT AND MATERIAL

Equipment and material installed for this practice shall be in conformance with the energy audit completed through Conservation Activity Plan 122, 124, 128 and/or ASABE Standard S612, Performing On-farm Energy Audits as well as CPS 670.

3. DESIGN/LAYOUT

Complete the CPS 670 Information sheet (attached).

Poultry operations: Producer shall furnish written certification from their Integrator that the planned lighting improvement meets the Integrator's lighting system design and specification criteria.

4. SUBMITTALS/CERTIFICATIONS

The Producer or Installer shall furnish the NRCS written certification from the manufacturer that furnished equipment and materials conform to the requirements of this specification, energy audit and Code 670. Product submittals are required to be submitted to NRCS for approval prior to installation.

Where improvements involve new electrical boxes, wiring, fixtures, controls, etc., the Producer or Installer shall furnish NRCS with certification from a Licensed TN Electrician or Company that all housing, wiring, mounting, and connections meet National and/or Local electrical codes.

The Producer or Installer shall certify that the installation of all furnished equipment and material meets all codes, laws and regulations.

The Installer or Vendor shall furnish to the Producer warranty certifications, spare parts lists, service bulletins/manuals, and instructions covering the operation and maintenance of the furnished equipment to Producer.

5. INSTALLATION

Installation shall conform to all applicable NRCS standards and specifications, manufacture recommendations and guidance, local codes, laws, and regulations.

6. OPERATION AND MAINTENANCE (refer to EFOTG for fillable form)

New, replacement, or retrofit systems and related components or devices shall be operated and maintained in accordance with the manufacturer's recommendations. Keep a written log of maintenance performed.

Keep energy use records such as electrical and/or fuel use for a period of 5 years after implementation of this practice.

7. INSPECTION OF RECORDS

NRCS shall have the right to inspect the installed equipment and material throughout the life of this practice. For five years, NRCS shall have the right to review and inspect Producer records as outlined in Section 6, above.

Lighting Diagram: Draw in simple lines to illustrate rows of lights, and label as row 1, row 2, etc. Or, where needed, draw circles or rectangles to indicate individual fixtures.

Existing Lighting System

Row	Type	Bulb Qty	Bulbs per Fixture	Fixture Spacing	Typical Lumens per Bulb	Bulb Wattage	Dimming	Type of Controls	Additional Information
Row 1									
Row 2									
Row 3									
Row 4									

New Lighting System

Row	Type	Bulb Qty	Bulbs per Fixture	Fixture Spacing	Typical Lumens per Bulb	Bulb Wattage	Dimming	Type of Controls	Additional Information
Row 1									
Row 2									
Row 3									
Row 4									

General Notes for Lighting Tables

Dimming: Yes or No (Y/N)

Type: Incandescent (INC), CFL, LED, linear fluorescent (LF-T12, LF-T8, LF-T5), etc.

Bulbs per Fixture: Most fixture types use only one bulb. Some such as linear fluorescent use two or more.

Lumens per Bulb: For old lights, estimate based on efficacy multiplied by bulb Wattage. Typical efficacies: 15 lm/W for incandescent, 50 lm/W for CFL, 55 lm/W for LED. For new bulbs, do not estimate, instead get value from packaging.

Type of Controls: manual switches, clock timers (for lights only), whole-house integrated controllers (controls all systems), etc.

Efficacy - is the amount (lumens) of visible light produced per Watt of electricity burned.

Producer and Contract No.

Lighting Location

United States Department of Agriculture
Natural Resource Conservation Service

CPS670 Lighting System Improvement
Information Sheet