

Farm Energy IQ



Farm Energy Efficiency Principles— Module Outline

AGRICULTURAL SERVICE PROVIDER (ASP) TRAINING DESCRIPTION

Learning Objectives: Participants in the educator training session will understand the basics of energy efficiency and applications to farm operations. This includes an understanding of:

1. Basic thermodynamics
2. Elements of heat transfer
3. Issues of energy conversion and the processes involved
4. Definition of energy efficiency
5. Fundamental approaches to improving energy efficiency
6. Applications of energy efficiency principles to specific activities, particularly those related to farming

TRAINING MATERIALS

1. Slide File for ASP Presentation
2. ASP Activity Sheet – Evaluate Heating Sources
 - a. Calculation Tool - Annual Electric Use Worksheet
3. Additional Reading for ASP
 - a. Assessing On-Farm Equipment Efficiency and Energy Use
 - b. Lowering On-Farm Utility Costs with Electricity Monitors
 - c. Greenhouse Energy Conservation Strategies (Runkle & Both)
 - d. The Farmer’s Handbook for Energy Self-Reliance – A Guide to Using Energy Efficiency, Biomass, and Renewable Energy on the Farm (Institute for Energy and the Environment, Vermont Law School, www.agenergysolutions.org)

FARMER TRAINING DESCRIPTION

Farmers who participate in the farmer presentation will learn the basics of on-farm energy efficiency:

1. Basic overview of energy (types and processes)
2. Energy efficiency fundamentals
3. Relative efficiency of different technologies

4. General methods for improving energy efficiency
5. Specific technologies and applications that improve energy performance
6. Energy sources and renewable energies

TRAINING MATERIALS

4. Slide File for Farmer Training
5. Fact Sheet for Farmer Training
6. Case Study for Farmer Training - Comparative Analysis of Two Types of Lighting in a Dairy Barn
7. Additional Reading for Producer
 - a. Assessing On-Farm Equipment Efficiency and Energy Use
 - b. Greenhouse Energy Conservation Strategies (Runkle & Both)
 - c. The Farmer's Handbook for Energy Self-Reliance – A Guide to Using Energy Efficiency, Biomass, and Renewable Energy on the Farm (Institute for Energy and the Environment, Vermont Law School, www.agenergysolutions.org)

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Any mention of brand names or models in this report is intended to be of an educational nature only, and does not imply any endorsement for or against the product.

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