ANSI/ASABE S612 JUL2009 (R2015)
Performing On-farm Energy Audits

American Society of Agricultural and Biological Engineers

STANDARD

ASABE is a professional and technical organization, of members worldwide, who are dedicated to advancement of engineering applicable to agricultural, food, and biological systems. ASABE Standards are consensus documents developed and adopted by the American Society of Agricultural and Biological Engineers to meet standardization needs within the scope of the Society; principally agricultural field equipment, farmstead equipment, structures, soil and water resource management, turf and landscape equipment, forest engineering, food and process engineering, electric power applications, plant and animal environment, and waste management.

NOTE: ASABE Standards, Engineering Practices, and Data are informational and advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. The ASABE assumes no responsibility for results attributable to the application of ASABE Standards, Engineering Practices, and Data. Conformity does not ensure compliance with applicable ordinances, laws and regulations. Prospective users are responsible for protecting themselves against liability for infringement of patents.

ASABE Standards, Engineering Practices, and Data initially approved prior to the society name change in July of 2005 are designated as "ASAE", regardless of the revision approval date. Newly developed Standards, Engineering Practices and Data approved after July of 2005 are designated as "ASABE".

Standards designated as "ANSI" are American National Standards as are all ISO adoptions published by ASABE. Adoption as an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by ASABE.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

CAUTION NOTICE: ASABE and ANSI standards may be revised or withdrawn at any time. Additionally, procedures of ASABE require that action be taken periodically to reaffirm, revise, or withdraw each standard.

Copyright American Society of Agricultural and Biological Engineers. All rights reserved.

ASABE, 2950 Niles Road, St. Joseph, MI 49085-9659, USA, phone 269-429-0300, fax 269-429-3852, hq@asabe.org

Documents
Document Sharing Hub

Copyright American Society of Agricultural and Biological Engineers
Provided by IHS Markit under license with ASABE
No reproduction or networking permitted without license from IHS
Full document details: ASAE S612 2015

Licensee=/, User=,
Not for Resale,

ANSI/ASABE S612 JUL2009 (R2015)
Approved July 2009 as an American National Standard

Performing On-farm Energy Audits

Developed by ASABE with the cooperation of USDA NRCS. Approved by cross division representation of the society under the guidance of T-11, Energy, and approval of T-01, Standards (Policy & Adoption). Adopted July 2009. Approved by ANSI July 2009; reaffirmed December 2015; reaffirmed by ANSI December 2015.

Keywords: Audit, Costs, Efficiency, Energy, Management

1 Purpose

1.1 This Standard establishes procedures for performing on-farm audits to determine and document current energy usage, and to provide an estimation of energy savings from alternatives in the cultivation, protection, harvesting, processing and storage of agricultural commodities and in the feeding, housing and processing of farm animals and animal products. This Standard is provided to guide the reporting of data and the preparation of specific recommendations for energy reduction and conservation with estimates of energy savings.

2 Scope

2.1 This Standard is intended to support energy audits of all types of farming operations (which includes ranching) typically found in North America. Energy audits shall exclude the farm residence, except where it is not practical to separate base line data.

2.2 This Standard does not address secondary (off-farm) energy savings in the development and evaluation of alternatives. For example, reduction in the amount of fertilizer used on a farm would represent a reduction of the associated energy needed to produce fertilizer for the farm at a fertilizer production facility (off-farm). This type of energy savings is not addressed as a part of this Standard.

3 Definitions

3.1 energy: For the purposes of this Standard energy is the resource used to power equipment to do mechanical work or to generate heat, light or cooling.

3.2 energy resource: Source from which energy is obtained, including gasoline, diesel fuel, biofuel, propane, natural gas, electricity, solar, wind, wood, biomass, geothermal, etc.

3.3 farm enterprise: Production category of a farm. For example, a farm may include a field crop enterprise and a livestock enterprise (see Table 1).

3.4 major activity: A discrete activity associated with a farm enterprise that utilizes an energy resource, or that heavily impacts energy resource use. For example, a cropping enterprise may include grain drying, crop planting, tilling, and harvesting activities (see Table 1).

3.5 component: Individual parts of a major activity. For example: lighting systems include lamps, ballasts, timers, sensors, etc. (see Table 1).

3.6 energy auditor: A licensed professional engineer or other technically qualified individual who will certify that the audit report provided to the farmer/rancher meets the requirements outlined in ASABE S612.

Documents
Document Sharing Hub
Copyright American Society of Agricultural and Biological Engineers
Provided by IHS Markit under license with ASABE
No reproduction or networking permitted without license from IHS
Licensee=/, User=,
Not for Resale,
Full document details: ASAE S612 2015